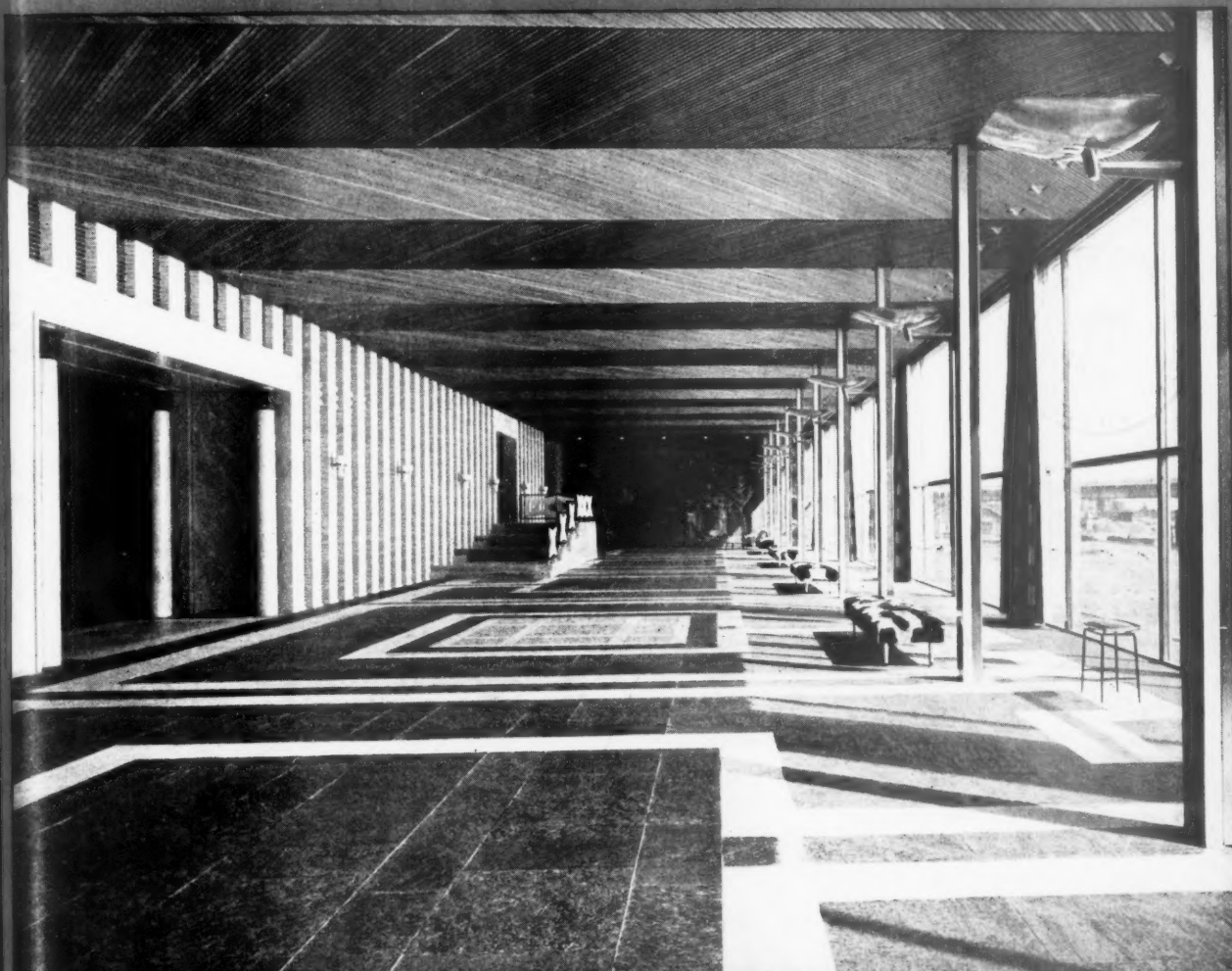


THIRD SERIES VOL 63 NUMBER 2

DECEMBER 1955

THE JOURNAL OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

66 PORTLAND PLACE LONDON W1 • TWO SHILLINGS AND SIXPENCE

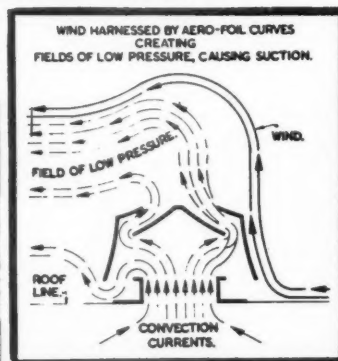
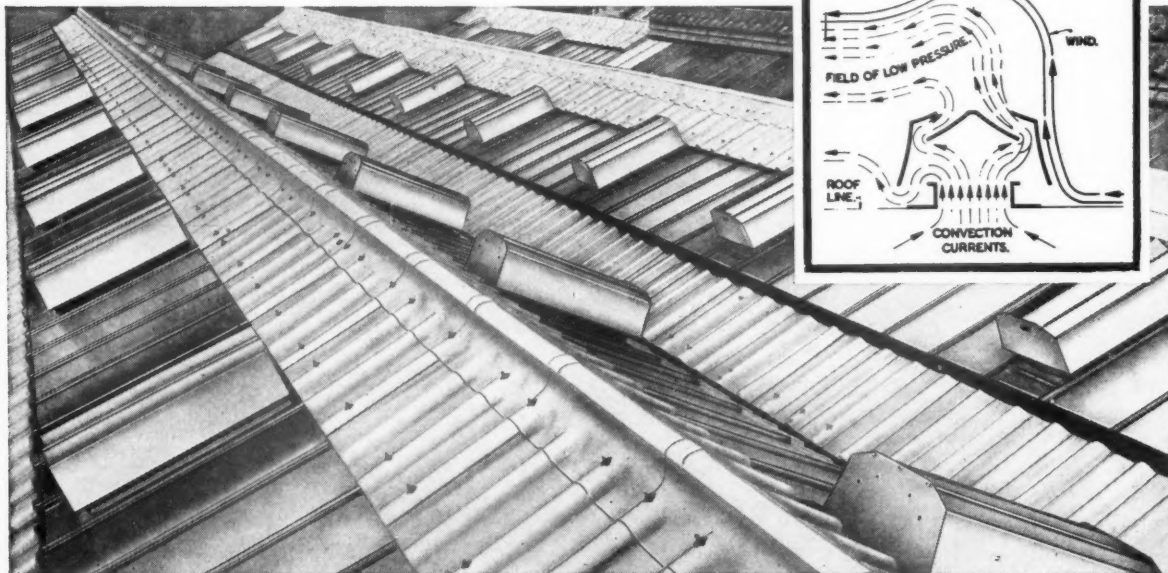


The Provincial House at Arnhem. Architects: J. J. Vegter and H. Brouwer. The great south gallery

Colt planning overcomes heat gains . . . at DRUMMOND BROS.

new Guildford extension

Architects : Brownrigg & Turner B.A., A/ARIBA
163, High Street, Guildford, Surrey



Drummond Brothers, the well known machine tool manufacturers, were building a new extension at Guildford. In designing the Building the Architects were anxious that satisfactory working conditions would prevail at all times despite a considerable heat gain from plant and human occupancy. Furthermore, the process required a light shop necessitating considerable areas of roof glazing which, during the summer months, would add considerably to the heat gains owing to solar heat transfer.

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TWO SHILLINGS AND SIXPENCE
TELEGRAMS: RIBAZO WESDO LONDON

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New Honorary Members

The Prime Minister, the Rt. Hon. Sir Anthony Eden, K.G., M.C., M.P., has accepted the Council's nomination to the Honorary Fellowship. Mr. Pembroke Wicks, C.B.E., L.L.B., Registrar of the Architects' Registration Council of the United Kingdom, and Sir Frederick Handley Page, C.B.E., have accepted the Council's nomination to the Honorary Associateship.

The 1956 Conference

As previously announced, next year's British Architects' Conference is to be held at Norwich from 30 May to 2 June, the hosts being the Norfolk and Norwich Association of Architects. The theme of the Conference will be architectural economics or 'value for money'. The exact title has not yet been settled but the principal speakers will be Dr. J. L. Martin [F], Mr. E. D. Jefferiss Mathews, O.B.E. [F] and Dr. J. C. Weston of the Building Research Station.

We publish on page 72 of this JOURNAL a list of hotels. Members are advised to book their rooms not later than 31 March.

Irish Architects and the A.B.S.

The Royal Institute of the Architects of Ireland have produced and are selling their own Christmas card in aid of the A.B.S. Customs difficulties prevent the cards prepared in London being sold easily in the Republic of Ireland. The card has been designed by J. Arthur Gibney, a student in the School of Architecture, the Technical Institute, Dublin, and copies are being sold to members and to the public at 6d. each including envelopes with free postage on orders of 12 or over. They can be obtained from the R.I.A.I. at 8 Merrion Square, Dublin. Proceeds go to the A.B.S. which, the R.I.A.I. say, 'has given generous help from its limited funds to distressed members of the profession and their families in Ireland'.

Architecture Club

A supper of the Architecture Club was held at Kettner's restaurant, Soho, on Wednesday 16 November under the Chairmanship of the President, Viscount Esher [Hon. F.]. It was followed by a debate on the motion: 'That new buildings no longer express their purpose.' The debate was opened by Sir Howard Robertson, M.C., A.R.A., S.A.D.G., Past President R.I.B.A., and Mr. Denys Lasdun [F], and was continued by Mr. Mark Hartland Thomas, Mr. Gontran Goulden, Mr. T. A. Darcy Braddell, Mr. Michael Waterhouse, Mr. Lionel Brett, Mr. G. A. Jellicoe, Mr. Desmond Heap, Mr. E. Maxwell Fry, Miss J. Adburgham, Sir Hugh Casson, Miss Jane Drew and Mr. W. G. Fiske.

Changes at the Ministry of Works

Sir Harold Emmerson, who has been Permanent Secretary of the Ministry of Works since 1946, is to become Permanent Secretary of the Ministry of Labour and National Service, where he was Chief Industrial Commissioner during the war. Sir Harold has been a good friend to the architectural profession and it will wish him well in his new appointment. His place is being taken by Mr. E. F. Muir, who has been Deputy Secretary of the Ministry of Works since 1954. Mr. Muir was an Under-Secretary in the Ministry of Works from 1946 to 1951 and after a period of service in another ministry returned to the Ministry of Works as Deputy Secretary.

National Association of Architectural Students

The formation is announced of The National Association of Architectural Students (of Great Britain), its objects being to link architectural students and affiliated societies, to act on behalf of architectural students in student matters, and to further architectural education by providing facilities as desired by the members. Membership is open to all architectural students in Great Britain, either on a corporate basis at a capitation fee of 6d. per head per annum, or as individuals at 2s. 6d. per annum. A number of the full-time schools have already joined, and the Association now hopes that all students outside the full-time schools will come forward without delay and join too.

The Association hopes to promote its aims by means of discussions, lectures, exhibitions, study groups, exchanges of work, etc. It also proposes to hold an annual congress, the first one to be in London next summer, and to participate in international architectural student activities. It is organised on a regional basis, the regions at present being North, South, West and Midlands. The President is Gary Kaufman, of the A.A. School of Architecture, the Honorary Secretary is Martin Bailey, of the Bartlett School of Architecture, and enquiries and applications for membership should be addressed to him there.

The Association does not at present propose to publish its own magazine, but hopes to arrange for some space to be given it regularly in one or more of the established architectural journals.

Mr. Basil Spence, Hoffman Wood Professor

Mr. Basil Spence, O.B.E., A.R.A., A.R.S.A. [F], has been appointed Hoffman Wood Professor of Architecture at Leeds University for the session 1955-56.

Symposium on Drawing Office Technique

This symposium, organised by the R.I.B.A. Science Committee, is to be held on Tuesday 17 January at 6 p.m. Four architects have been invited to describe briefly the methods used in their offices to produce, with the minimum of effort, comprehensive drawings for all purposes from the first commissioning of a project to its completion.

The speakers will be Mr. A. W. Cleeve Barr, Dipl. Arch. [A], Mr. Henry Elder, M.B.E. [F], Mr. Richard Sheppard, A.A. Dipl. [F] and Mr. Gordon Tait [F]. The Chairman will be Mr. Peter Shephard, B. Arch. (L'pool) [A]. Mr. Peter Trench, O.B.E., T.D., Managing Director of Bovis Ltd., will open the discussion.

It has been suggested to the speakers that the problem should be treated under the two main headings, *Project Drawings* and *Production Drawings* and that they should describe any special procedures in use in their own drawing offices. The meeting will be open to general discussion after the papers have been presented, and it is hoped that architects, contractors, engineers and other users of architectural drawings will attend the meeting.

An exhibition of drawings contributed by several invited architectural offices, including those of the speakers, will be on display concurrently with the symposium and will remain open throughout the week beginning 16 January. Each contributor to the exhibition has been asked to provide samples of the drawings produced for a single complete project and to indicate the total number of drawings used of each type shown.

In addition to the drawings supplied by the speakers contributions have been invited from The Hertfordshire County Council, Sir Thomas Bennett, K.B.E. [F], Messrs. Yorke, Rosenberg and Mardall [FF], Mr. D. H. McMorran, A.R.A. [F] and Messrs. Tayler and Green [FF].

The organisers feel that in a period of changing conditions and methods, when much attention is being given to productivity throughout the building industry, it is important that drawing office techniques should keep pace with thought in design, administration and construction. It is hoped that the symposium will provide a useful opportunity to review architects' drawings and the way that they are produced in different types of office.

The Chair of Architecture, Cambridge University

A report of the Council of the Senate of Cambridge University recommends the establishment of a professorship of architecture (limited to one tenure) and the appointment of Dr. J. L. Martin, M.A., Ph.D. [F], at present Architect to the London County Council.

English Taste in the Eighteenth Century

The Royal Academy Winter Exhibition, which remains open until 26 February, accords well with the current Portuguese exhibition in being on English Taste in the Eighteenth Century. Obviously dear to the heart of the President of the Royal Academy, it is a careful selection and admirable arrangement of the pictures, furniture, textiles, porcelain and silver of a high period of English art which still dominates English taste. Someone has said that English architects of today design modern houses but themselves live in Georgian ones. Certainly the wealthier classes prefer to furnish their houses with eighteenth-century furniture or with copies of it. These two exhibitions are well worth a simultaneous visit, provided one can digest so much elegance and beautiful craftsmanship.

The High Flats Report

Some copies of the full report of the Symposium on High Flats, held last February, are still available. This is the only full statement of the technique of high flat block construction at present published and members may find it useful for reference. Copies are obtainable from the Secretary, R.I.B.A., price 6s.; by post 6s. 6d. Cheques or postal orders should be sent with applications.

Reproduction of Ordnance Survey Maps

Members are reminded that Ordnance Survey maps are Crown Copyright and reproduction in any form constitutes an infringement of the Copyright Act 1911.

Under the existing arrangements made between the Royal Institute and the Director-General of the Ordnance Survey in 1947 and 1949, members who have occasion to make use of Ordnance Survey maps in this way can obtain a licence for the purpose covering either hand-tracings only or reproduction both by hand and mechanical means, the respective fee being 5s. and 10s. per annum in respect of each partner in a firm. Fees may be paid up to five years in advance if desired. Full particulars are obtainable on application to the Director-General of the Ordnance Survey, Ordnance Survey Office, Leatherhead Road, Chessington, Surrey.

In this connection, the Director-General has announced that, whereas the terms of present licences restrict the size of extracts which can be reproduced to 500 sq. in., it has been decided to reduce the maximum size of reproductions to 200 sq. in., having regard to the increasing production of the new National Grid plans which are considerably smaller than 500 sq. in. in size. Such licences would however contain a proviso that holders who wished to reproduce extracts larger than 200 sq. in. could make separate application to the Ordnance Survey Office for the necessary permission and for the assessment of the appropriate fee.

All new licences and renewals of existing licences both for hand tracings and for hand and mechanical reproductions which are issued on or after 1 January 1956 will therefore restrict the size of extracts to 200 sq. in. Current licences, whether for one year or five years, will not be affected during the remainder of the period for which they are valid.

Clean Air in St. Marylebone

The campaign for clean air recently received considerable publicity in the Borough of St. Marylebone, in which the Royal Institute is a ratepayer. On 3 October a public meeting was held in the town hall to inaugurate the St. Marylebone Clean Air Campaign. The Royal Institute had no need to send a representative because it is entirely blameless in the matter of smoke pollution in the Borough, the building having an off-peak electrical heating and hot water installation and doing all cooking by gas. There is not a single flue in the building and the only smoke generated in it comes from the burning of tobacco.

On the other hand the R.I.B.A. building receives more than enough soot from its neighbours. The stone façade is slowly darkening and recesses, particularly in the statuary, are becoming defaced with black deposits. Were it not for the proper provision by the architects of drips on projections, the darkening would be worse. A comparison between the R.I.B.A. building and some of its dripless neighbours whose façades are extensively streaked affords a useful object lesson in this respect.

It is surprising that off-peak electrical heating has not been more widely used in large institutional and commercial buildings. It is specially economical in labour, today an expensive commodity.

R.I.B.A. Diary

FRIDAY 23 DECEMBER. 12.30 p.m.—TUESDAY 27 DECEMBER inclusive. R.I.B.A. offices and library closed for Christmas holiday.

MONDAY 9 JANUARY 1956. 6 p.m. Library Group. An evening on Sir Robert Smirke introduced by John Weiss.

TUESDAY 10 JANUARY. 6 p.m. General Meeting. Announcement of Award of Prizes and Studentships. *The Motorway and its Environment*. Sir E. Owen Williams, K.B.E.

MONDAY 16 JANUARY—SATURDAY 20 JANUARY. Exhibition in connection with Symposium on Drawing Office Technique. Monday–Friday, 10 a.m. to 7 p.m. Saturday, 10 a.m. to 5 p.m.

TUESDAY 17 JANUARY. 6 p.m. Symposium on Drawing Office Technique.



General view of the principal façade

The Provincial House at Arnhem

Architects: Ir. J. J. Vegter and Ir. H. Brouwer

By M. D. Beasley, A.A. Dipl. [A]

THE FORMER HOUSE of the Province of Gelderland was destroyed in September 1944, in those grim days which saw British and Dutch united in common valour and suffering and which made the name of Arnhem so well known and respected around the world. The rebuilding of this war-stricken town has of course offered great architectural opportunities, and an exceptional one in the design for a provincial headquarters, as this is the first province to have a building specially planned for it in modern times.

It is necessary to understand that a province of The Netherlands is a degree higher in civic importance than an English county, and that Arnhem is the capital of Gelderland, the largest and geographically and economically most varied of the eleven provinces. Members elected by the Provincial State, the governing body of a province, constitute the First Chamber of the central government at The Hague. A provincial headquarters must combine a working centre for civil administration with a fitting place of reception and entertain-

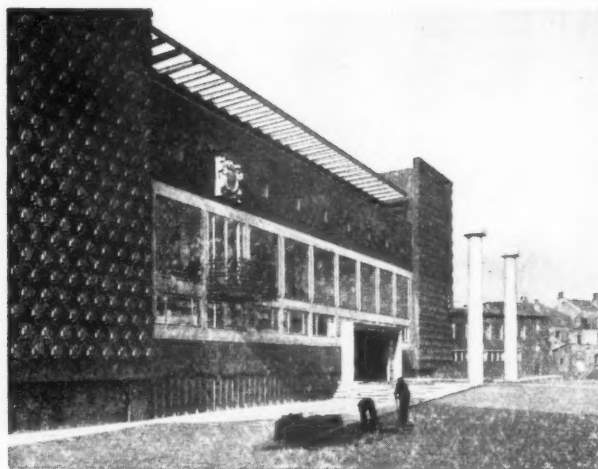
ment for guests who may be royalty, diplomats, industrialists, farmers, housewives or children. Its uses are many and its appeal must be wide; it is a visible symbol of unity of a part of a nation.

The design is the outcome of very close collaboration of civil authority, architects and artists which began at the earliest stages of planning and was never allowed to weaken throughout the whole process of design, erection and furnishing. The ultimate aim of all, never lost sight of, was to produce a building not simply suitable in function and character but which would be capable of inspiring the natural pride of the community. The House of the Province of Gelderland is above all the House of the Gelderland people. The architects have travelled widely in their search for guidance in their object; not solely for architectural inspiration, although the evidence of this can be clearly seen, but to capture again and to put into contemporary terms the spirit which produced such successful civic headquarters as the town halls of Stockholm and Hilversum.

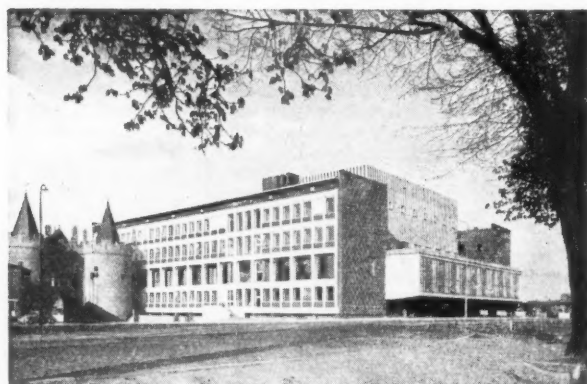
The basis of the plan is a symmetrical arrangement around four sides of a courtyard which must be crossed to gain the main entrance. Courtyards are a tradition in which the Dutch have often excelled, as witness those of the *hofjes* at Haarlem and The Hague or the more recent inner court in the Hilversum Town Hall. On a larger scale there is the Prinsenhof in Amsterdam which has served as the city hall ever since Louis Napoleon took as his palace the rightful home of the burgomasters. At Arnhem however the possibilities and charm of a large outdoor room have eluded the architects. Like so many quadrangles in northern Europe it is dull, draughty and rather oppressive. This is despite the use of a honey-coloured travertine, the variety of elements of the façade and a most successful pattern and texturing of the paving. The walls of the court are slightly bowed, the corners splayed and a most ponderous rhythm set up by the first floor wall and window treatment, all of which seems to indicate a too self-conscious over-designing and striving after refinement.



Left and above: details of the principal façade. Left, the opening gives access to the courtyard in which is the main entrance. Above, detail of the balcony which is entered from the great south gallery



Left: oblique view of the principal façade. Below, view of the south-west corner showing offices on the west façade and the old Sabels Gate which is connected to the new building by a bridge



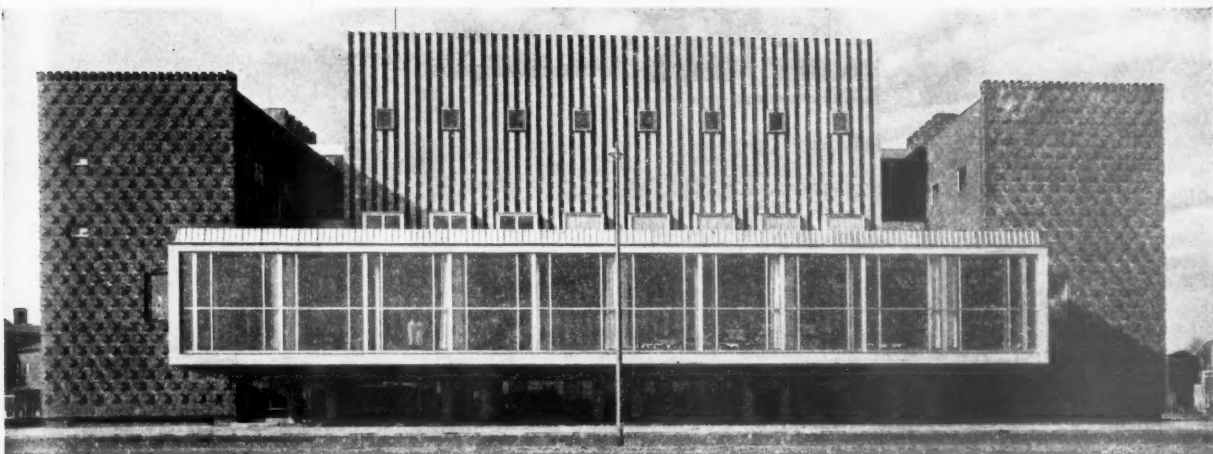
There is a strong flavour here of the work of Auguste Perret which, if intentional, is the oddest choice and quite out of character with the rest of the building. Undoubtedly this courtyard is the least satisfying part of the external design.

It is principally the first floor plan which dictates the overall symmetry of the form, for here is situated the main reception suite, the two galleries of which dominate

the north and south façades. These galleries are linked by two wide corridors and one narrower one running round the court, which with the galleries enclose the high brick stack containing the council chamber. Off these flanking corridors is a series of important rooms, the offices for the Provincial Governor, the Clerk to the Province, committee rooms and a library.

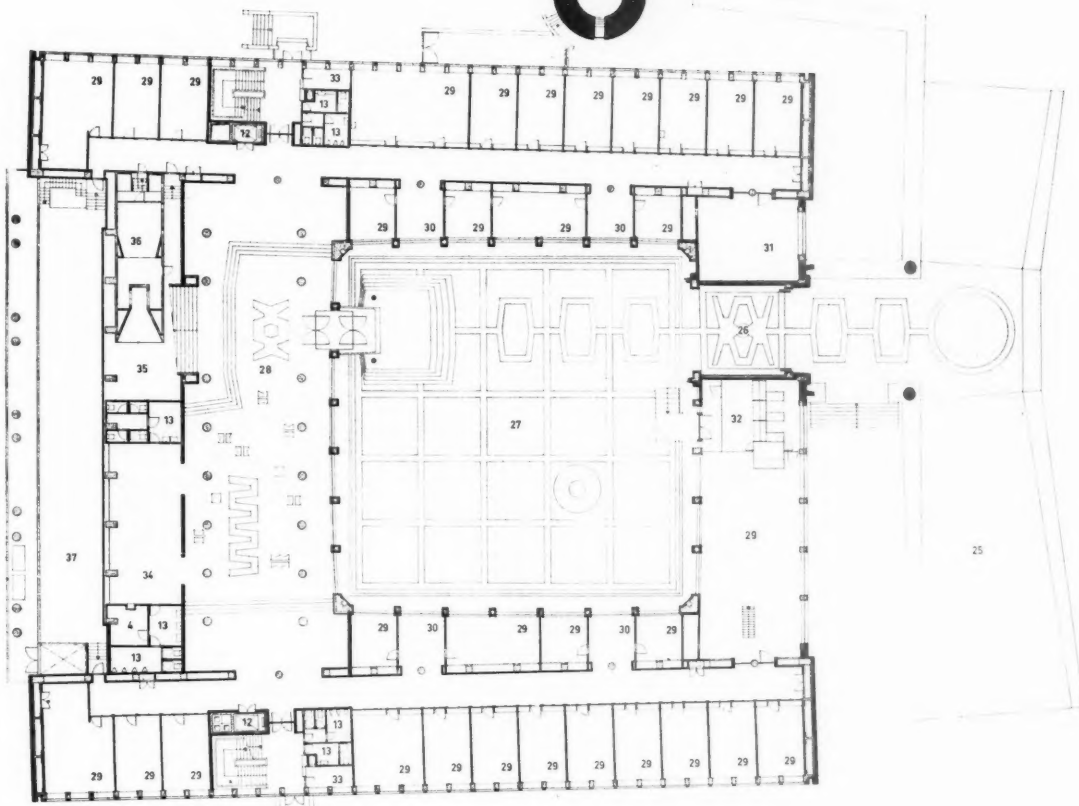
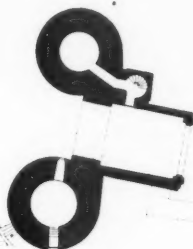
The southern gallery, travertine-faced

and supported on pilotis, thrusts forward from the grip of two similar, narrow wings with blind end walls which provide the main opportunity for a display of Dutch virtuosity in brickwork. It is possible to see well into this gallery, beyond the slender roof supports, to the rear wall, the council chamber block which rises cliff-like to create the central and only vertical form in the composition of the building. This block,



Above: The south façade in which the dominant feature is the great south gallery

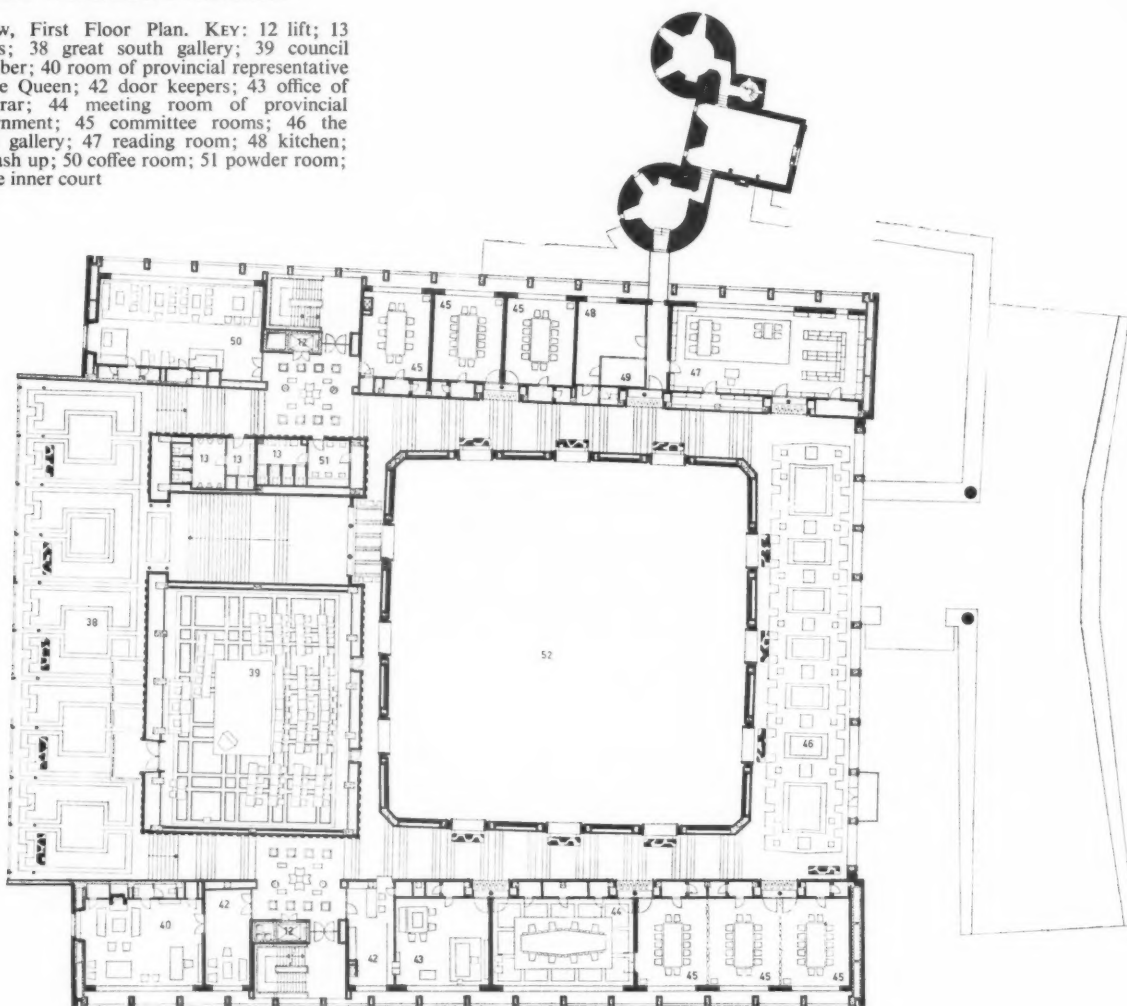
Below: Ground Floor Plan. KEY: 4 storage; 12 lift; 13 toilets; 25 main approach; 26 gateway; 28 main entrance hall; 29 offices; 30 waiting rooms; 31 bookbinder's workshop; 32 passport office; 33 messengers; 34 visitors' cloakroom; 35 air conditioning plant room; 36 air filters; 37 archives office.





Fountain in the courtyard. The sculptor was Professor V. P. S. Esser of Amsterdam

Below, First Floor Plan. KEY: 12 lift; 13 toilets; 38 great south gallery; 39 council chamber; 40 room of provincial representative of the Queen; 42 door keepers; 43 office of registrar; 44 meeting room of provincial government; 45 committee rooms; 46 the small gallery; 47 reading room; 48 kitchen; 49 wash up; 50 coffee room; 51 powder room; 52 the inner court



which appears in effect to be almost windowless except at a distance, consists of ribbed brickwork in black and white. These bricks, which are hand made and glazed, are most effective and seem to be the newest contribution to the Dutch national material, for they can be seen elsewhere in Holland and are becoming very popular.

The east and west wing frontages are, together with the south façade, the most successfully handled elevations. Through them a link is obtained at first floor level with the greater scale of the two gallery fronts by opening up the whole of the structural bays and setting back the fenestration. This device is wholly justified by the importance of the rooms at that level. On the other floors the bays are subdivided and express the continuous range of offices behind. The design of these two façades is extremely competent and remarkably well proportioned. On the west side the surviving Sabels Gate all but touches the new work; its very close

proximity is rather haphazard and disturbing but may become less so when the whole district takes on its final and more crowded appearance. This old work contains a few offices of the Provincial House, reached by a short bridge, and provides perhaps a retreat for those civil servants still unreconciled with contemporary architecture.

The entrance into the courtyard is on the north side from the market-place, a large and irregular open space dominated on the opposite corner by the Great Church still under reconstruction. In the design of this façade the architects have pitted their ingenuity against almost insuperable problems, largely of their own making. In theory there is the irregularity of the Market as a good reason for the asymmetrical placing of the entrance, which at first seems only wilful. Nevertheless the plan has called the tune here. Admittedly the Market had to be taken into account too, but the architects have allowed them-

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selves to be bullied and sought a none too happy compromise.

The way into the court is through a seemingly low and strongly framed portal which is one of the most refined external features of a great number of magnificent details to be found throughout the building. The entrance is set well over to one side and is balanced by a cast-iron balcony surmounted by the provincial coat of arms on the other. To make doubly sure of the asymmetrical emphasis on the entrance, two rather odd pillar forms are placed a little to the front. They are of course essential to the design as it stands, but at the same time they endorse the unwisdom of this composition; in themselves they are of little more consequence than a similar pair in Portland Place.

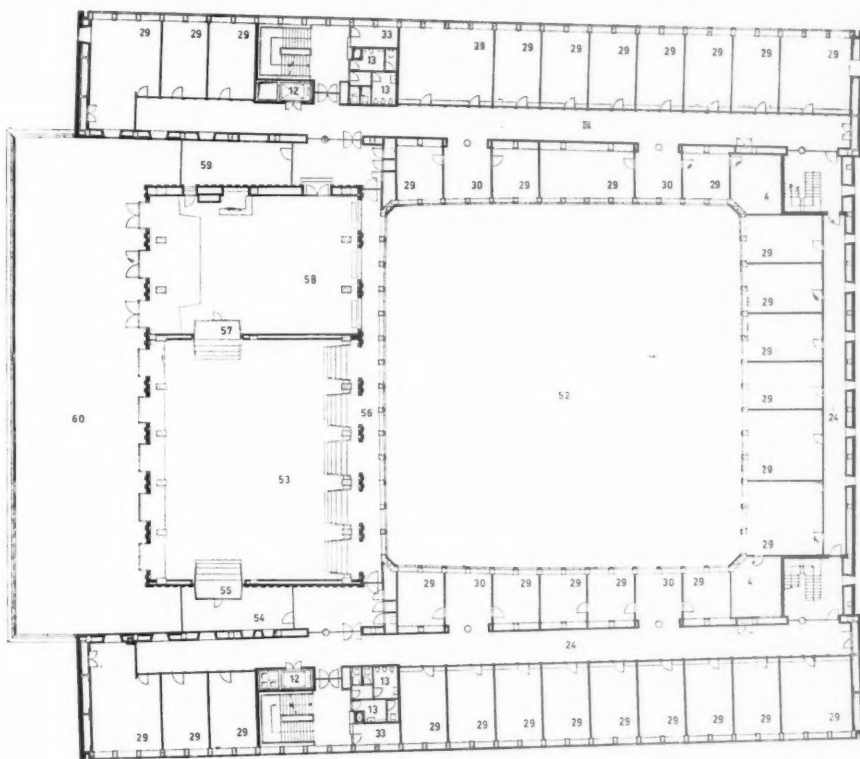
Having solved one problem, these pillars immediately create another; they tend to rob the portal behind of some of its much-needed scale. This conscious break-up of an otherwise balanced front recalls recent Swedish practice as seen in the city hall and hotel at Karlskoga. Here however the smaller scale and sense of informality helps, also there is a full view through to the back of the courtyard at ground level to an equally asymmetrically treated wall; at Arnhem the view through is restricted.

Except for a minor way into an office on the north side of the court there is only one entrance into the building, that on the south side of the courtyard directly oppo-

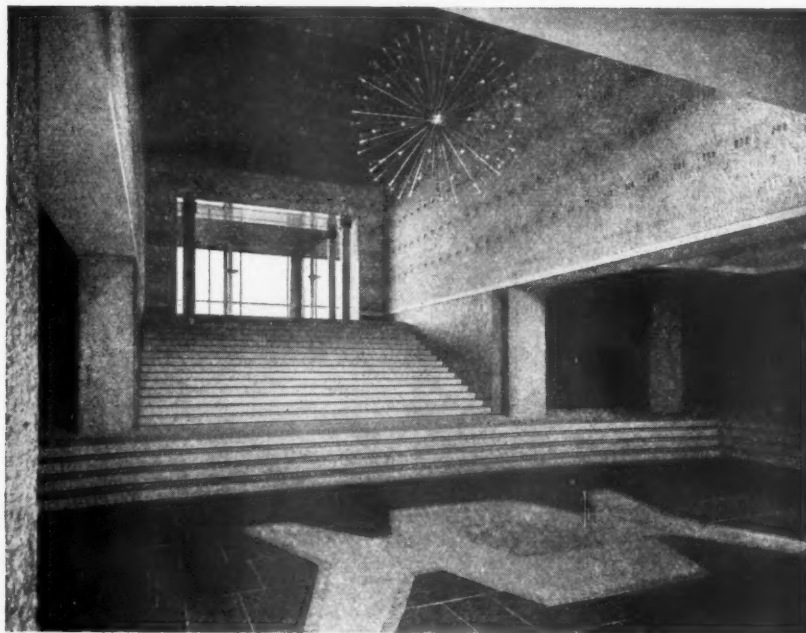


General view of the courtyard, the main entrance portal on the left. The walls are faced with honey-coloured travertine

site the way through from the market. This entrance is very carefully and effectively contrived, the ceiling is low and the materials rather dark (marbles, granite,



Second Floor Plan. KEY: 4 storage; 12 lift; 13 toilets; 24 corridors; 29 offices; 30 waiting rooms; 52 the inner court; 53 upper part of provincial government chamber; 54 press waiting room; 55 press gallery; 56 public gallery; 57 officials' gallery; 58 canteen; 59 parlour; 60 terrace



The grand staircase leading from the entrance hall to the great south gallery

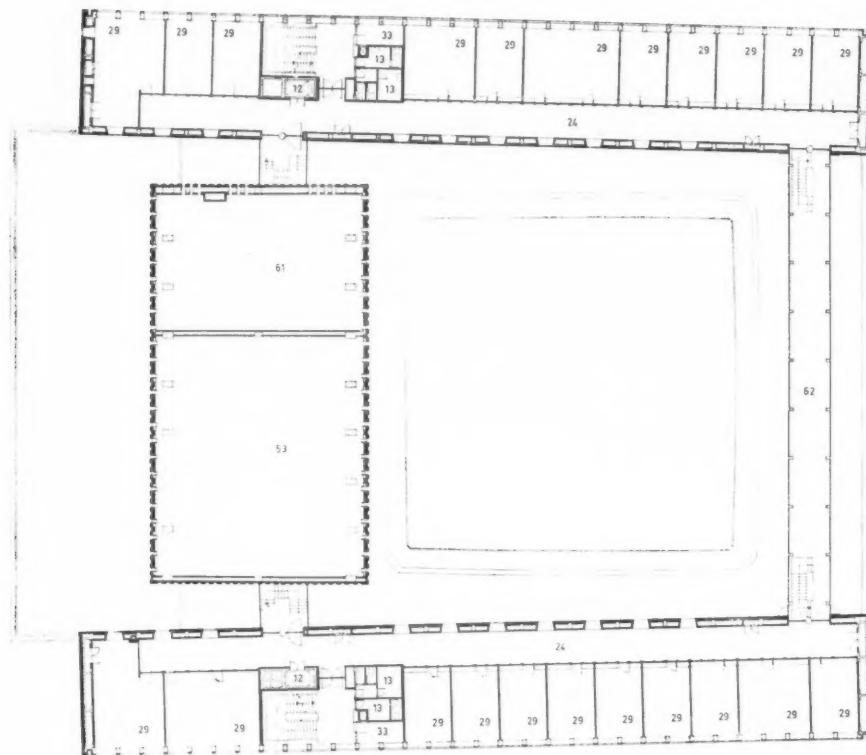
tesserae and mahogany), but though there is circulation to the right and left one is led naturally up the broad, facing stairs into the brilliantly lit south gallery. At night

this stair approach is enlivened by a very simple but most attractive central light, a galaxy of many small bulbs on the ends of brass rods all bursting out from a globe.

The effect of the south gallery is exhilarating, it is full of lively interest yet very restful by virtue of carefully integrated architecture and decoration. The wide view towards the Rhine with the great bridge a little to the left, although not beautiful, is essentially a part of the Arnhem scene. The gallery on the north side is sufficiently similar to that on the south to form part of the suite of main reception rooms, but in many ways too it has a different character. Here the scale is smaller and the windows are separate units, while the views are much closer—one into the courtyard, the other towards the market-place.

At one end of the south gallery a small stairway, with all the romantic promise that an indirect approach can give and very reminiscent of Ostberg's Stockholm town hall, leads into the council chamber. This is a very lofty room with fenestration high up and an air both businesslike and calm. To the eyes of Netherlands critics it is, apparently, rather cold and unwelcoming; it lacks that untranslatable but inevitable Dutch quality *gezelligheid* but is none the worse for that. It will not be clear to the British why a council chamber should approach cosiness, yet this ever-present desire has, in other circumstances, bedevilled much recent Dutch interior decoration.

This chamber is far from being bleak, rather it has the air of cool serenity gained by the use of a whole wall of pale grey marble and a much subdued green in the



Third Floor Plan. KEY: 12 lift; 13 toilets; 24 corridors; 29 offices; 33 messengers; 53 upper part of provincial government chamber; 61 upper part of canteen; 62 connecting gallery

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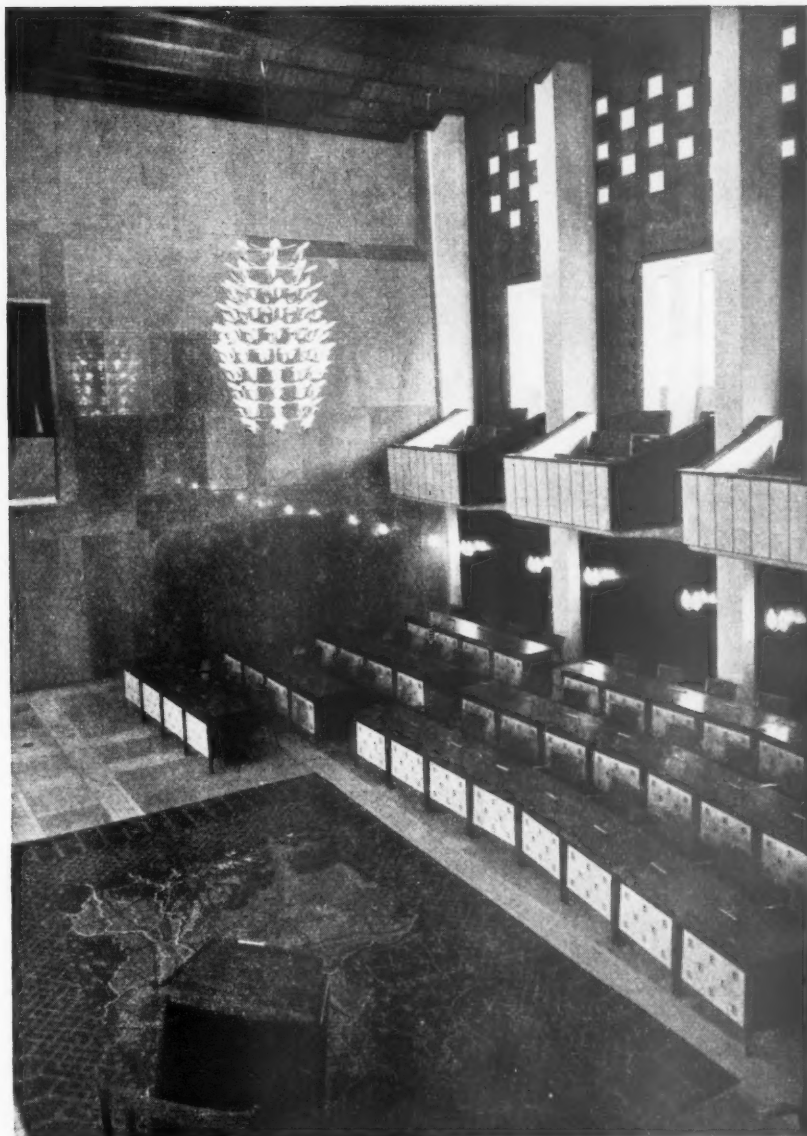
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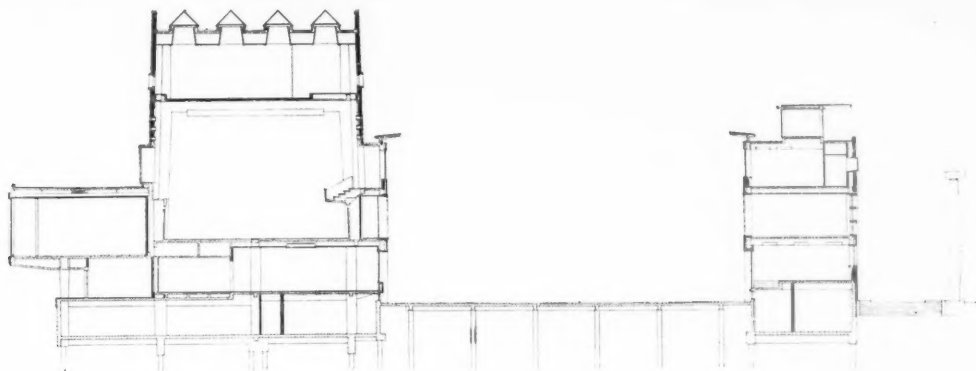
The little fountain. Sculpture by Mrs. Fri Heil of Arnhem

decoration. There is, too, as nearly everywhere in this building, a great variety of forms, devices and materials. No room could be dull where there is so much breaking up of the surface and where little balconies break out from two of its walls to accommodate the Press and public, in a manner not unlike the boxes at The Festival Hall. A quality of decorous, solid richness, so suitable to the meetings of burgomasters, is obtained by the use of high grade natural materials, and a gay liveliness is allowed in such details as the chandeliers and the carpet with a map of the province upon it.

The smaller rooms and upper offices are very variously treated and are, in general, very successful. The rooms of the Queen's Commissioner and the Clerk of the Province have a nicely contrived character of high officialdom combined with being very pleasant places in which to work or be received. Three committee rooms in the east wing are capable of being made into one or two larger ones by means of sliding leather-covered partitions. The coffee room for the staff on the first floor with an oblique view to the river has all the qualities



The provincial government chamber. The carpet pattern includes a map of the province. The public gallery on the right



North-south section through the great south gallery, the provincial government chamber and courtyard

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One of the committee rooms



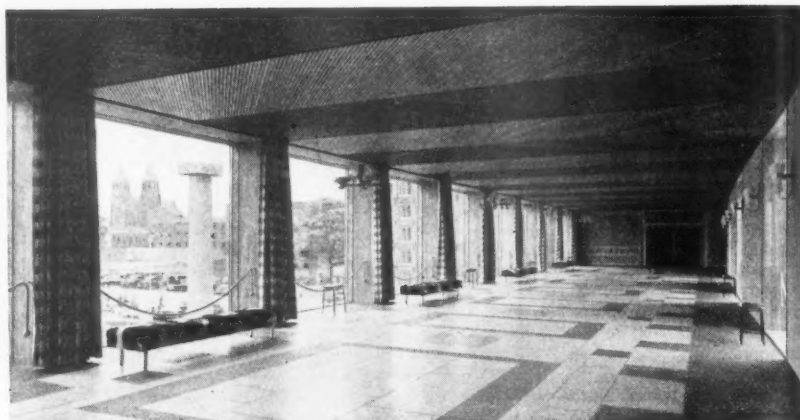
The coffee room

of comfort so desirable to the Dutch and would, to their English counterparts, be undreamed of luxury.

Nearly everywhere, both inside and out of this building, one sees decorative art by many artists in a wide range of forms and styles. At a very early stage the artists, most of whom are local, were invited to contribute to the new Provincial House so that their work could be incorporated and made an essential part of the architecture, and so too that the artists would be fully aware of the needs and ultimate setting for their products. This is an ideal, a natural but all too rare collaboration between architects and artists, the virtue of which is fully revealed by the results. It will be a happier day in this country when not only architects but public authorities too get around to the idea that modern artists are capable of creating works suitable for other places than mantelselves. Anyone still in doubt should visit Arnhem, where forethought in planning and designing for decorative art has provided a much needed opportunity for the artists and has greatly enriched the work of the architects.

There is a splendid example of the use of mosaic on the wall of the southern gallery which greatly enhances the room as well as giving emphasis to that end where the stairs lead up to the council chamber. Sculpture ranges from the large bronze fountain figures in the court to the charming little goddesses who are weaving the fate of the province in a very benign manner over the fireplace of the room of the Queen's Commissioner.

Those of the old school may find this building too contemporary, while to many of the new it will be over-romantic and derivative. There is indeed some truth in the latter criticism, but it is nevertheless not one that is likely to appeal to those for whom the building was intended. They, it is certain, consider that they have got a very fine building; to them the carpings of architectural critics would be meaningless and presumptuous. Whatever its style, whatever its faults, this is a building which



The north gallery

is stimulating and will make a direct and understandable appeal to the community for which it has been built. One may ask how far it is possible, actually and morally, to go very far beyond that which can be understood by the average man in the community when that community is the client. The attitude of brutal coercion implied in the socially advanced designs of students of some schools today is as unmoral as it is unrealistic—as well as producing a synthesis of philosophy and technique but no architecture.

The Gelderland Provincial House is undoubtedly architecture, often very good architecture; and it is certainly stimulating to the craft-starved British architect. The finish, sensitive detailing and choice of materials are well up to the very high standard that has been for so long associated with Dutch architecture and a visit to Arnhem will fill any architect with envy and some with chagrin. It should fill him too with respect for the able way in which the very difficult task of creating this new building has been handled by the government of the province, its architects and artists.



The three fates presiding over the province. Sculpture by Mrs. E. Schurinan-Henny, The Hague

Some Impressions of Architecture and Office Practice in the U.S.A.

By N. Keith Scott, M.Arch.(M.I.T.), M.A., B.Arch., Dip.C.D. (L'pool), A.M.T.P.I.[4]



The V. C. Morris shop in San Francisco. Frank Lloyd Wright. It is so exclusive that a nameplate is considered unnecessary. The interior is most exciting

THE BRITISH ARCHITECT on visiting America for the first time will probably need to disabuse himself of several erroneous impressions, among the foremost of which is the belief, engendered largely by the American technical Press, that good contemporary architecture (or even contemporary architecture) exists in every town and city in that country. The lavishly illustrated American books and magazines are full of pictures of new buildings of such interest and variety as to suggest to a British architect, restricted as he is as to purse and opportunity, that America is the 'promised land'.

It would be wrong to say that there is little going up—on the contrary, America's building expansion has to be seen to be believed; but when seen, the utter mediocrity of most of this work is equally difficult to credit on this side of the Atlantic. This mediocrity is commonly associated with a flamboyance and prodigal waste of material that does nothing to hide the fact that even in America only about 9 per cent of the total building work is architect-designed. Of this 9 per cent at least two-thirds can be written off as remaining bound by the shackles of extreme conservatism, in that there are still vast areas of the South and Mid-West in which only the Colonial styles in one form or other are countenanced.

In the main there are only three areas of the U.S.A. where buildings of outstanding merit may be found in sufficient number to render practicable a visit to several in one day. Of these the New England area is probably the most profitable, and within a 50-mile radius of both New York and Boston one can find a number of buildings remarkable both for excellence of design and novelty of construction. There is for instance New York's Lever House, now well documented, or Saarinen's auditorium for M.I.T.—a building which has not, on completion, quite fulfilled the promise of the early stages of construction. Louis Kahn's museum at New Haven, Connecticut, employs the still seldom used

tetrahedron concrete floor construction, which exciting though it is serves to stress once again, in my view, the rough, unfinished appearance of naked concrete when used indoors and left untreated after the formwork is struck. A short ride to the Cape from Boston brings one to the picturesque village of Wood's Hole where architects may study one of the few executed works of Buckminster Fuller. This brilliant, eccentric inventor-engineer is little known in England, but his meandering 5- and 6-hour lectures, his ability to mesmerise students into a sort of unreasoning trance and his disconcerting habit of making at least 10 per cent of his fantastic-sounding ideas work are almost legendary in the American architectural world. At Wood's Hole, Fuller has designed one of his geodesic domes of wood frame covered in transparent plastic to house a restaurant. The structural solution affords a delightful sense of release and lightness even if certain problems of construction and utility are left unsolved. A host of buildings from the boards of Gropius, Aalto, Breuer, Chermayeff, The Architects' Collaborative, Johnson, Skidmore Owings and Merrill, Anderson and Beckwith, Stubbins, etc., are all within easy reach of this area.

The Bay area of San Francisco is also liberally sprinkled with contemporary work, but poverty of imagination in design and a general low standard of detailing and craftsmanship anticipate the touch of time and weather in rendering much of this work worn and decrepit in appearance. This criticism particularly applies to the residential work where wood framing and sheathing is an almost unalterable rule, but the constructional details and weather drips used often seem better suited to the benign climate of Southern California or Florida than to the damp, foggy atmosphere of the north with its punishing effect on house fabric.

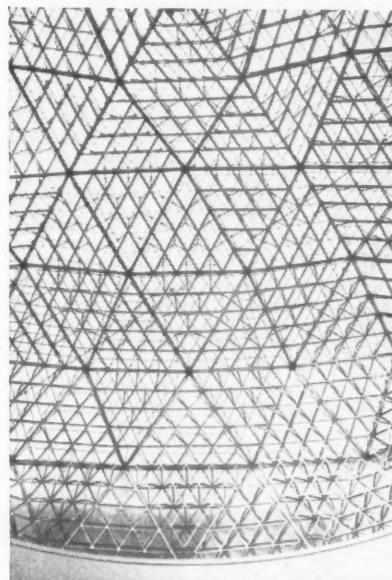
Throughout the San Francisco area generally, however, modern architecture is definitely 'in', and here lies one of the few sections of the U.S.A. where one can tour large residential areas and find consistent attempts at the contemporary idiom on all sides. In spite of this there are remarkably few really outstanding buildings which can compare with those on the eastern seaboard of America. Welton Becket's Stonestown shopping centre is an important contribution to suburban shopping precincts, and in spite of its relatively early date it has some charming corners and some much-needed humanity and intimate scale in its detailed treatment.

I personally felt that the highest laurels should go to the early pioneers rather than to any of the younger men. I saw nothing to equal the brilliant imagination and ingenuity of the work of Maybeck in the

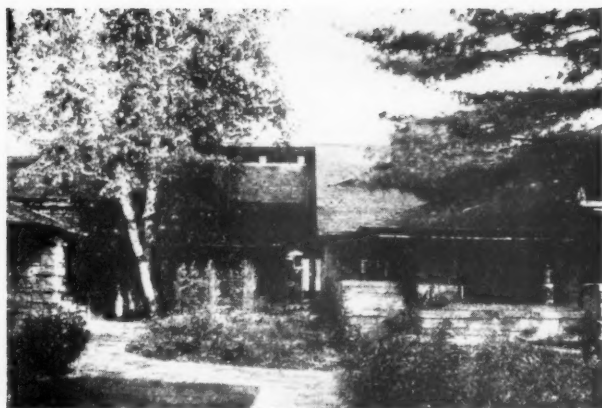
first two decades of the 20th century, nor was I able to find anything to excel Mendelsohn's Maimonides Hospital or Frank Lloyd Wright's tiny jewel of a shop for V. C. Morris in downtown San Francisco. I would however make one exception in favour of the younger school. Some of Carl Warnecke's designs are first class, and I agree with Wallace K. Harrison's opinion that the Mira Vista school in Richmond by this architect is one of the ten best buildings erected in the U.S.A. since World War II. In plan, form, detail and especially in fitness to an extremely steep site it is a delight to see.

A third area of great interest is that around lower Wisconsin and upper Illinois—in that it affords an opportunity for a very complete study of the birth of the modern American architectural movement in Chicago; it also permits an appraisal of the buildings designed by that most prolific of modern architects, Frank Lloyd Wright, and it presents a chance to see something of the work of Mies van der Rohe.

It is a remarkable experience in travelling round the Oak Park section of Chicago to see the many works of Frank Lloyd Wright and to realise perhaps for the first time the full genius of the man. In England I have the impression that he is too often regarded as an eccentric designer—or simply as a crank. This is understandable to some degree and is helped by two factors. The



The Ford Rotunda, Michigan. This aluminium dome was designed by R. Buckminster Fuller to sit on top of an existing vast circular wall. The wall was weak and no other designer seemed able to roof the space by normal methods



Taliesin East, Wisconsin. A view in Frank Lloyd Wright's own home. It has a superb site on the brow of a hill and is one of a complex of buildings used by his staff and pupils

first is the impact of his writings and speeches in which his completely egotistical concept of his role in 20th-century architecture amuses some and infuriates others. The second factor is the impossibility of conveying, either by drawing or photograph, the peculiar spatial quality and the clarity of the angular complexity which pervade his best work. Too often when reading his plans the eye becomes riveted to a lozenge-shaped lavatory or an oval kitchen and the mind is bemused by and preoccupied with the consequent plumbing and fitting problems. This is a distraction to be avoided and an attempt should be made to 'walk' from space to space and level to level in an effort to visualise what the light from such-and-such a window will do to this and that space.

No such difficulty of translation is encountered by a study of virtually the only existing works of Mies van der Rohe in Chicago. (It is not often realised that, apart from the Tugendhat House, Mies had not erected any permanent buildings until he was about 60 years of age and living in Illinois.) I found when visiting the Illinois Institute of Technology and the Lake Shore apartments that the drawings and photographs which I had previously seen of these works expressed the situation clearly and fully. One cannot fail to be deeply impressed by the excellence of the detailing and the care of the finishing, and it remains for each separate beholder to decide for himself whether these ends have justified the means used to achieve them—means which often involve total disregard for orientation, site, structural economy and logic and, most frequently, optimum human comfort and utility.

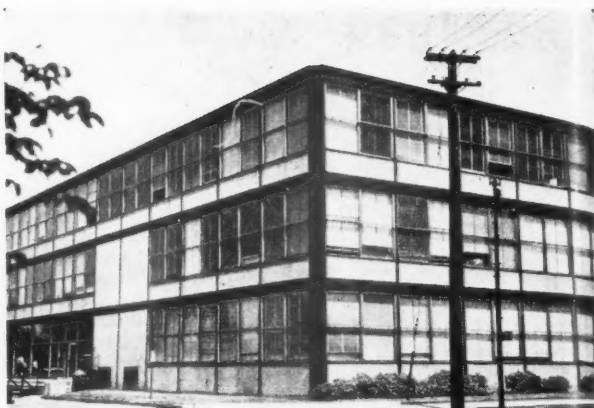
Numerous other 'oases' could be named, but vast distances must be covered and a healthy pocketbook is a necessity if one is to have a hope of visiting them all. To help the British reader to grasp the sheer enormity of America while looking at an atlas, it might be mentioned that it is farther from Boston to Washington D.C. than from Glasgow to London, with New York lying in a comparable position to Manchester. Nobody with any intention of

seeing sights en route should dream of crossing the continent in less than ten days—and an average of 300 miles per day would have to be maintained to do it.

Much of the public architecture was in my view 'boxy' and lacking in any sense of scale. This was due to some extent to insensitive or confused disposition of masses and a total bankruptcy of ideas in the use of decoration, sculpture or other aids to man's orientation within a scheme. In the field of private housing there are many architects who are producing excellent work for individual clients in the custom-built class, but except for the isolated example of Karl Koch's work on the Tech-built house (which is enjoying considerable success) mass-produced housing is generally of low standard both in design and layout. Indeed I did not see an example of Federal or local housing authority work which could equal that of better authorities in England, and I certainly saw nothing to compare with Harlow or Crawley.

The British architect is immediately impressed of course with the high degree of mechanisation on building sites and the extensive use of prefabricated units—features which were forced upon the industry by the astronomical wage rates in operation in the building trades. Indeed it would be no exaggeration to say that certain sections of the trade have the public by the throat. In Boston for instance a bricklayer's rate of pay is 21s. 10d. per hour, while in Detroit the figure is 26s. 3d. Income tax is not so high as in Britain and the cost of living certainly not more than twice as high. Add to this, whether a bricklayer be good, bad or indifferent, his output is restricted by some unions to 300 bricks laid per day, and it can readily be understood why the trade is pricing itself out of existence. No architect concerned with economy would venture to specify masonry construction for private houses, though masonry is sometimes used as a veneer with a wood frame structure.

It therefore follows that much more work is done by the carpenters and joiners who, though equally well paid, produce far



The Illinois Institute of Technology, Chicago. Mies van der Rohe. One of the engineering workshops in the still unfinished campus. It adjoins one of the worst slums in the city

more for the same money. Here again though, the labour cost induces architects to reduce refined joinery to an absolute minimum, and a moulding compounded of anything other than rectangles is a comparative rarity. There is furthermore an increasing pressure on the architect to restrict all sections to millwork sizes, so that hand-moulding or planing is eliminated. The net result is a descending spiral of quality in refined detailing. The workman becomes used to dealing with simple sections; the architect complains that carpenters' standards are low; and he strives to simplify further his detailing; the workman becomes even less skilful. This has a logical repercussion in that the schools no longer stress or even give cognisance to the need for sensitivity and refinement in both structure and finish. From observations based on a journey of over 20,000 miles through 40 states, I believe it to be no mere accident that, Frank Lloyd Wright apart, all the truly great architects now working in America are of European background or training—where such things still count and are an essential part of the young architect's training. There are many good and extremely competent men of purely American schooling, but in the last analysis their work is primarily derivative, and none has made as yet any significant contribution to the modern movement.

All the really large offices are however confined to American-trained employers. The vast expansion of industry before, during and since the Second World War has promoted the establishment of firms geared to purely industrial architecture and capable of completing the whole job within their own organisation, from site location to the last air conditioning and electrical installation detail. A. Kahn and Giffels, Vallet and Rossetti are perhaps the two best known. In the general field there are also large offices, and both Skidmore, Owings and Merrill, and Welton Becket each have staffs approaching 1,000 employees. Although it is very easy to 'get lost' in such an office and to be pigeon-holed into some phase of work for the



Christian Science Church, Berkeley, California. Built by Maybeck about 1912 and his best work. Embodies a very early external use of coloured asbestos board



Federal housing, Philadelphia, by Oscar Stonorov. Public authority housing and exceptional in being excellent. The view shows part of a very large scheme

rest of your life, yet these offices have a well-rounded self-sufficiency so that Welton Becket, for instance, who specialises in shopping centres, can design a scheme down to the last ceramic tile or light fitting.

The Englishman looking for work in an American office must be prepared to make some adjustments to his accustomed method of working. First there is the completeness required of the working drawings, which leave nothing to the builder's imagination and which render a specification almost superfluous. Secondly, he must cultivate clean pencil drawing since nothing, save in certain classes of Government work, is finished in ink. Furthermore all normal work, including some working drawings, is done on what we know as 'detail paper', on which it is impossible to erase neatly owing to its composition. The opaqueness of such paper makes tracing very difficult and it is easy to imagine the appearance of a dieline print with the ubiquitous pencil finish on the original.

Final working drawings are usually finished on 'vellum' or very good quality tracing paper, and this indeed gives a good print. It is much too expensive for general office use however, and even after two years of work in American offices I pined for some decent middle quality English tracing paper.

A further hardship—save in an exceptional office—is the absence of any tea or coffee break. Visiting consultants and clients are no better treated. The days in consequence at first seem endless, but after a while one becomes accustomed to this extraordinary practice. Abstinence however is not habit forming and one's balance is speedily restored within 48 hours of resumption of work in Britain.

In some aspects however American office practice is, in my view, superior to ours. First, all offices work a 5-day week and hours are usually 8.30 a.m. to 5 p.m. I understand that many London offices have adopted this practice though most northern offices still cling to the unsatisfactory 5½ days.

Secondly, the American drafting room is free from the trade catalogue clutter which is the bane of its English counterpart. This happy state of affairs is entirely due to Sweet's Catalogue. Under a most admirable arrangement advertisers display their wares in any format and typography they wish, the only restriction being a uniform page size, and with the reservation of a small space for an index number—the top right- (or left) hand corner of each page. All the sheets are then grouped in trades, and the whole bound in massive volumes which at present run to about six books. Advertisers pay of course for the printing and production costs in general and the books are distributed free to registered architects. Sweet's is an annual publication and it is received in exchange for the past year's edition. There is an edition for architects, engineers, and I believe for the building trade, and together these books must surely form the most complete assembly of information on the building profession in the world. Reference to any subject and to the wares of any manufacturer is ridiculously easy and the prodigious waste of time spent in this country in looking through shelves of variously assorted pamphlets is thereby avoided. The convenience and advantages of such a comprehensive arrangement are self-evident and one would wish for its speedy adoption in this country.

The large American office is particularly efficient in business procedure, office administration and contract management. I believe that few English offices, for example, could tell a client with any degree of certainty how long working drawings would take for any job costing over, say, £50,000. What often happens here is that the architect is badgered into committing himself to a snap date line at a meeting with the client. The client naturally, in the case of a project of such size, has put pressure on the architect before popping the 'how long?' question, with the result that there is a tendency to overestimate hopelessly the office's ability to produce. The result is panic, overtime—and some times the chagrin of having to disappoint the client.

It is my experience in America that the architect requires notice of the 'how long?' question; he first consults the job architect, who estimates the number of drawings required and multiplies the total square footage by a given number of hours (usually 15 to 18 hrs./sq. ft. including specifications) and thereby arrives at a man-day figure. It is then easy to calculate how many staff can be transferred to a job, and from this how long it will take. This gives the architect a sense of security which enables him with confidence to allow himself the maximum time in the design stage and to utilise the full 1 per cent of his design free for that purpose.

Great emphasis is placed on preliminary research as a time and money saver. My first job was associated with the design of a £2,000,000 hotel. My principal's instructions detailed me to M.I.T. Library. 'I don't want to see you for two weeks', he said. 'Come back here with a complete bibliography from 1942 onwards with everything of note on the design of hotels, restaurants, kitchens, night clubs, garages and shops, and with a typed report on the most important developments in each of these fields'.

Very big offices frequently go to the trouble of full-size mock-ups of important repetitive units, and seemingly endless time is taken over cost analyses and comparative methods of detailing certain units. The net result is that when working drawings are started nearly every detail has been considered and the machine swings into action with the inevitability of a bulldozer.

It is possible that there are offices in England where such practices obtain. If such exist, they are outside my own personal experience. I am at the moment of the opinion that in the realm of overall business acumen and administrative efficiency the American architect 'has the edge' on his English counterpart. This need not be so, and greater application in either department would, I feel, attract even more public respect for our profession, especially inasmuch as we could add thereto our undoubted greater potential for sensitive, humanised architecture.

Research and Design Building for Messrs. C. A. Parsons and Company Ltd., Newcastle upon Tyne

Architects: S. W. Milburn and Partners [F/AA]



Above, the building as seen at night. Below, view of the entrance front



THIS BUILDING WAS AWARDED the R.I.B.A. Bronze Medal for the three-year period ending 3 December 1954 in the area of the Northern Architectural Association. It houses the research and design section of the celebrated firm of marine engineers of which Sir Charles Parsons, the inventor of the steam turbine, was founder. It is situated on the main Newcastle-North Shields road and stands at the corner of the extensive works buildings. The plan is L-shaped and the building is six storeys high.

On the left of a long entrance hall is the Sir Charles Parsons memorial hall and a waiting space. Here are exhibited some interesting specimens and models of Sir Charles's original work, a sculptured memorial plaque of the founder by Sir William Reid Dick and a portrait of him by Sir William Orpen.

The ground floor entrance hall, situated at the meeting of the two wings which form the L, is repeated on all floors and this arrangement gives centralised lift and staircase access to all parts of the building. The front wing, facing the main road, is occupied mainly by design and administrative accommodation, including a large and up-to-date canteen service on the top floor, with an open balcony. Almost the whole of the side wing is taken up by research laboratories and technical offices.

The building generally is in steel frame construction cased in concrete, with precast concrete floor units and roof. The elevations have been carried out in a combination of precast terrazzo, polished granite and pressed facing bricks. This has been done because exposed surfaces will have to be washed down frequently, on account of local smoke pollution.

The whole of the external glazing is in double-glazed units, consisting of two panes of polished plate glass separated by a metal spacer, the space between the two panes being hermetically sealed.

The lift installation comprises three sets of 'paternoster' lifts. This system employs a series of constantly moving cars into which passengers step and step out again when they reach the floor they want.

The lighting, heating and ventilating services have been closely related not only to each other but also to the design of the building itself. The ceilings play a major part in the provision of these services and, apart from the air-circulating services, the whole of the ceiling on each floor is built up of inverted trough-shaped anodised aluminium reflectors. These reflect the light given out by continuous lengths of cold cathode fluorescent tubes arranged side by side, so that almost the whole of the ceiling

Below, left, the plan of the ground floor
Right, plan of the third floor

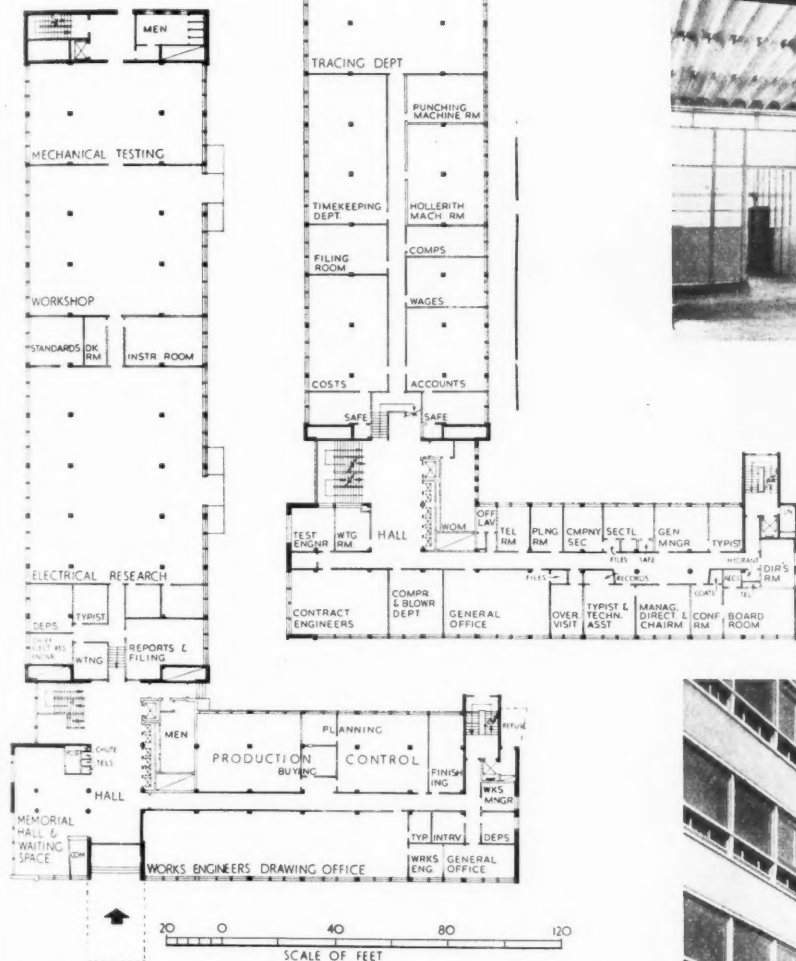
Right, interior view showing the method of artificial lighting by means of inverted trough reflectors
Bottom right, the side elevation



high level in the partition walls separating the various rooms.

The question of floor finishes was given much consideration, and cork laid in 12 in. square tiles was adopted for most of the floor areas, but the laboratory floors have acid-resisting composition tiles. Suitably designed linoleum tiles have been laid in the staff luncheon room.

The planning and construction were worked out in collaboration with Messrs. Parsons' design and research department. The general contractors were Messrs. Stephen Easton Ltd., of Newcastle upon Tyne.



is a source of light. The reflectors also have specially formed recesses to accommodate water pipes of square cross-section and thus they radiate heat as well as reflecting light over the entire ceiling area. Sound and heat insulating materials form a backing for this reflecting surface, and as the reflectors are perforated they act as sound absorbents.

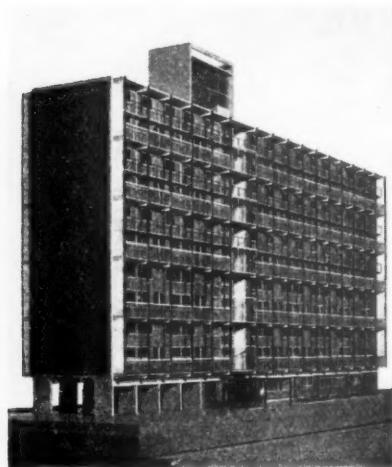
Heating is by low-pressure hot water circulated from calorifiers situated in the basement; they are supplied by steam from the works boiler plant. All service pipes are housed in five vertical brickwork service shafts at various parts of the building to supply the ceiling heating systems.

The ventilating system provides for an inlet-exhaust installation common to all

rooms, giving three air changes per hour. The inlet fans and air filtering equipment are placed in a roof penthouse and distribution is by means of galvanised sheet steel trunking through the vertical service ducts with branch trunks at all storeys under the structural floors. Extract ducts are situated under the corridor ceilings, grilles being fixed at

A Nominated Contractor Experiment

L.C.C. Housing at Picton Street, Camberwell



Model of one of the four 11-storey blocks, access gallery side

AT A RECENT Press conference, the Chairman of the Housing Committee of the London County Council, Mr. W. G. Fiske, together with Dr. J. L. Martin [F], Architect to the Council, reported progress on the interesting experiment now being conducted by the Council in the nomination of a general contractor at the design stage of a project.

It has long been a matter of general complaint among architects that when designing buildings in terms of new constructional techniques they are severely handicapped by not knowing beforehand whether the contractor who ultimately obtains the contract will be properly equipped to execute it. The contractor, for his part, may be aware that a design can be materially improved or cheapened by using methods and appliances—e.g. tower cranes—which have not been envisaged by the architect when preparing his design, but that to use these methods and appliances might well require substantial amendments to the constructional design, possibly involving complete redesign of the scheme. This is a defect inherent in the system of competitive tendering. It seems at present that the only way to overcome this defect is to collaborate with a nominated contractor from the outset, making use of a design team of architects, contractors, structural engineers and quantity surveyors. This is what the L.C.C. are doing in connection with their Picton Street project.

The object of the competitive tendering system is to safeguard the client against excessive cost. Therefore any new system must result in either an equivalent or less cost. The fact that a satisfactory building with novel methods of construction results from a new type of contract is beside the point unless the client is satisfied that the

cost has been reasonable. The final cost of the Picton Street project still remains to be ascertained, but progress so far has been so satisfactory that the L.C.C. have felt justified in issuing what amounts to an interim report. At the Press conference the contractual system was described, details of the construction finally adopted as a result of the work of the design team were made available and the progress of the work was discussed. The following are notes on these items.

The Contractual System. At the outset the procedure envisaged was as follows:—

1. The Council's architects to plan the scheme as regards layout, types of dwelling, accommodation in dwellings, numbers of storeys and plan groupings.
2. The Council's quantity surveyor to prepare his preliminary estimate of the cost of the work on the basis of known methods of construction used in previous schemes by the Council and this figure to be the target cost price.
3. The architect, his design team and the consulting engineer, together with the Council's quantity surveyor and representatives of the nominated contractor to work on the scheme together and when all points of detail of construction have been settled, bills of quantities to be prepared. These bills then to be priced by the contractor to reassure himself of the feasibility of building within the contract target price.
4. Savings made, due to the employment of different techniques, etc., to be shared between the nominated contractor and the Council, thus providing a strong incentive to both parties to search for savings. On the other hand, excess of final cost over the contract target price to be borne by the nominated contractor.

Clearly the success of such a system depends in very great measure on the goodwill and co-operation of all concerned. These, the Chairman of the Housing Committee said, had been present throughout the scheme, together with interest and energy.

The Picton Street Scheme. The housing site at Picton Street has an area of 17.9 acres and was acquired mainly under Part III of the Housing Act 1936, as a 'clearance area'. The area was acquired piecemeal and the scheme therefore relates to a site of very irregular outline with small pockets of development separated from the main area by existing residential and industrial buildings. The commencement of work on successive portions of the site had to be timed to accord with a rather complicated programme of acquisition spread over some two years.

The scheme provides for the construction of 682 dwellings: 320 in four 11-storey

maisonette blocks, 295 in 16 4-storey maisonettes, 42 in 3-storey balcony access flats and the remainder (25) in terrace houses. This gives a total density of 38 dwellings to the acre. There will also be a small number of shops, a club room, minor ancillary buildings and children's play spaces.

The constructional works, which began in January 1955, have been divided into two phases. Phase I, now in progress, comprises 250 dwellings and Phase II 432 dwellings. The first 11-storey block of maisonettes and three 4-storey blocks are now well under way.

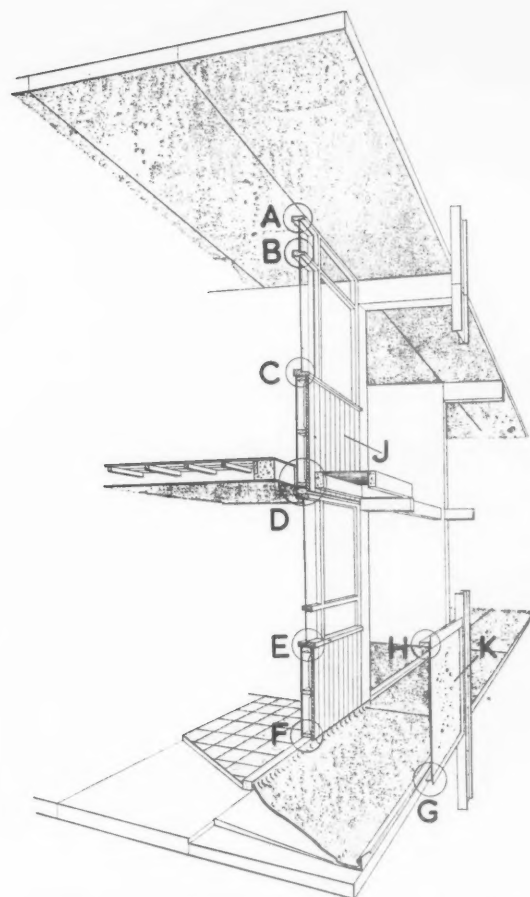
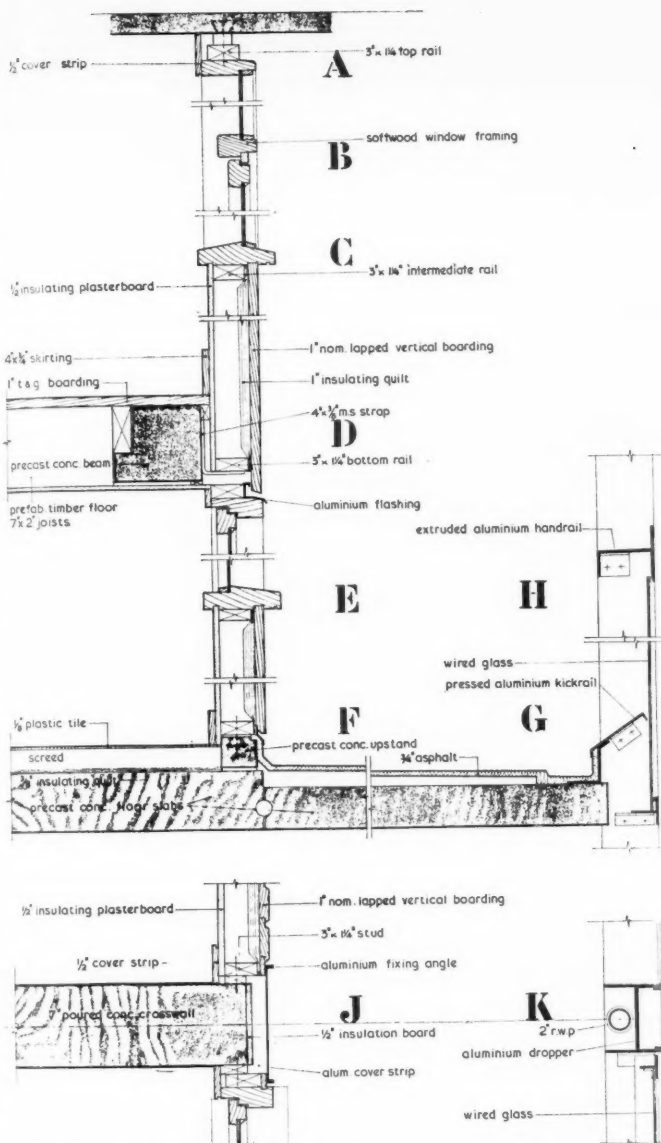
Operation of the Contract. The general contractors, John Laing and Son Ltd., were nominated some 14 months before the commencement of work on the site. The nomination was made after a number of firms had been interviewed and their organisations considered in relation to their suitability for the work.

An estimate of the cost of the scheme—approximately £1,700,000—was prepared by the Council's quantity surveyors on the basis of the known costs of comparable accommodation in current contracts which had been let after normal competitive tendering. This estimate was adopted as the target estimate for the work and became the 'target price', i.e., the maximum amount which the Council can be required to pay, subject to adjustment for certain defined variations such as wage rates and materials. The contractors were given and availed themselves of the opportunity of checking this estimate at an early stage so as to satisfy themselves that it was reasonable.

On completion of the design stage, bills of quantities were prepared for Phase I and priced independently by the Council and by the contractors. At this point the contractors were given the option of withdrawing if they considered the 'target price' was inadequate. The scheme moreover having been divided into two phases, a break clause was included in the contract documents to allow the contractors the opportunity of withdrawing from Phase II if for instance they came to the conclusion that the actual cost of Phase I would exceed the 'target price'. Agreement to continue with Phase II has in fact now been reached between the Council and John Laing and Son Ltd., and this firm will therefore continue with the whole scheme.

Payment is made to the contractors on the basis of actual costs, plus a fixed percentage for overheads and profits. The procedure for variations, the definitions of 'target price', 'prime cost', 'overheads', etc., are stated in the form of contract, which is an extensive document.

The Design Team. In addition to the architect, quantity surveyor and contractor members, the design team included repre-



Details of the form of structure finally evolved

tractors' works. This gave useful experience in the handling of the main structural elements and shuttering units by crane, in assembling and fixing other components such as panel walls and plumbing units and in certain plastering experiments.

Constructional Details. The following are notes on the construction finally arrived at by the design team. Some of them were described in the article on L.C.C. Technical Development and Research published in the October JOURNAL.

The 11-storey maisonette blocks. Structure: Reinforced concrete strip foundations. In situ 7 in. thick unreinforced concrete crosswalls, alternating with 14 in. reinforced concrete walls, containing ducts and flues. (Concrete strength 3,000 lb./sq. in. after 28 days.) Precast r.c. main floors and timber prefabricated intermediate floors, the latter fixed to precast r.c. beams. Prefabricated timber-framed external panel walls and internal partitions—the walls being faced externally with teak boarding, the partitions with plasterboard. The public staircase has in situ landings and precast r.c. stair flights. The balconies, on both long elevations, consist of wired glass in aluminium frames, bolted between extruded aluminium verticals with sheet

representatives of the consulting engineers, Messrs. Ove Arup and Partners, and of the Building Research Station (Department of Scientific and Industrial Research).

As already mentioned, the purpose of nominating the contractor at the design stage was that his knowledge and experience of building techniques and materials, his knowledge of plant and of site organisation and his views on how building time and costs might be reduced should be available to the architects and engineers at that stage and be allowed to exert due influence upon the design. In this instance the results of co-operation between the contractor and the designers have been fruitful. For example, the decision at an early stage to use a tower crane of known size and capacity for the erection of the 11-storey blocks enabled this design to

proceed on the basis of large prefabricated components, suitable for economic handling by this crane. Again, as a result of joint discussion, an early decision to attain as much speed as possible in erection time by reducing to a minimum such wet trades as plastering, in situ concrete (in horizontal members) and brickwork fundamentally affected the design of walls, partitions and floors. Another (unexpected) outcome of the team's work was the making use of the incidental possession by the contractor of a large quantity of used steel shuttering, this enabling the structural walls of the 4-storey blocks to be made more economically in low-grade concrete than in 9 in. brickwork.

Towards the end of the design stage a mock-up of a 2-storey maisonette unit of the 11-storey block was built at the con-



Model of one of the sixteen 4-storey maisonette blocks

aluminium screens between private balconies.

Services: Heating is by individual openable slow combustion stoves, with individual flues—precast flue linings being cast into structural walls. Plumbing is based on modified 'single-stack' principles, with vents to w.c. fittings only. The soil stacks and waste branches are in copper with 'push fit' spigot and socket joint using a neoprene ring. Electric wiring within maisonettes is in TRS cable within the timber floor and timber partition and under the timber boarding to the main floor, but is in conduit in walls and solid partitions. Mechanical extract ventilation (with a duplicate set of motors and fans situated in the roof motor-house) is provided for internal bathrooms and w.c.s. A second system, on similar lines, is provided for the individual gas-heated drying cabinets within each flat.

Four-storey maisonette blocks. Structure: Unreinforced 7 in. thick concrete cross-walls (2,250 lb./sq. in. after 28 days) with brick rubble aggregate mass concrete foundations and chimney stacks. In situ concrete main floors and prefabricated timber intermediate floors. Cladding and partitions similar to the 11-storey block except that the panel walls, being on sheer faces of the building, are required to have an incombustible finish and are therefore faced with sheet aluminium, over Asbestolux, instead of hardwood boarding.

Design Stage Investigations. During the design stage cost investigations of alternative designs were made for most components of the buildings, both 4- and 11-storey. These cost estimates were prepared independently by the quantity surveyor member of the architect's team, by the contractors' staff and by the Building Research Station surveyors and the results subsequently compared. The structural engineers prepared alternative designs for the structure with column and beam frames, with frames combined with walls and with both at varying spacings. A highly original

scheme was also prepared by the engineers for precasting the concrete walls in the form of staggered 2-storey-height units which would interlock with the precast floors. These schemes were discussed with the contractors' plant specialists and production engineers in relation to the use of large cranes and alternatively of light cranes rising with the building.

A number of different designs were also prepared for the floors—in precast concrete, in situ concrete, timber with and without beams, etc. The possibility of pre-casting floor slabs to give an adequate finish on the underside so that the ceilings can be decorated direct, omitting plaster, was considered, as was the suggestion to decorate the in situ concrete direct with a skim coat of self-coloured 'plaster' and experiments in this were made at the 'mock-up'. Taking all factors into account the system of construction now in use is estimated to be cheaper than the most economical column and beam system. Omission of reinforcement in the alternate walls (which has been allowed experimentally under Part IV of the Building Act) is a further economy. Again, savings have been made by quality control of concrete and by the design of mixes according to the strengths actually found to be achieved in tests, rather than in accordance with the Standard Bye-law mixes.

A variety of materials was considered for the design of the lightweight external wall panels, the cost target for which was taken as the traditional brick-cavity clinker panel wall, including the cost of supporting beams and an allowance for increase in cube (area of roof and foundations) which such thicker walls would require. Considerable work was done, with the co-operation of certain manufacturers, in the development of matt-finished, vitreous enamel panels suitable for external cladding. While there was little doubt that these panels could be developed to satisfy both architectural and maintenance standards, the work was abandoned on account of costs. A feature of the panels in both the

4- and 11-storey blocks (with certain limited exceptions) is that the facing material covers the softwood framing members (unlike previous panels used by the Architect's Department Housing Division in which a sheet facing has been fixed into a frame with glazing beads), so avoiding maintenance or painting of the frames.

The plumbing was considered in terms of copper, cast-iron and galvanised steel and quotations for comparable systems in these materials were obtained. The connections to the soil stacks in the 11-storey blocks which serve maisonettes, back-to-back, are of greater complexity than in the 4-storey blocks and this was found economically to favour a prefabricated copper system for the former and a cast-iron system for the latter.

For sound insulation purposes the floor finish to the main concrete floors separating maisonettes is 'floated' on an insulating rock or glass wool quilt. Given this quilting it was found that tongued and grooved boarding, on timber battens, was slightly cheaper than thermoplastic tiles on screed. As the former is a little better from the point of view of sound reduction and speedier to lay it was adopted except in kitchens and bathrooms, etc.

The roof finish consists of three-layer bitumen felt, with white stone chippings laid over 3 in. of lightweight screed (35 lb. per cu. ft.). Expansion joints are provided in the 11-storey blocks at three points only and are formed by dividing the top 3 ft. of the cross walls into two leaves separated by $\frac{1}{4}$ in. thickness of fibreboard.

Wired glass was used for balustrade panels as the cheapest available and architecturally acceptable finish. The framing in the 11-storey blocks is in aluminium to reduce weight at the ends of cantilevers and also to reduce maintenance costs. Alternative quotations were also obtained for the main structural members in galvanised steel, but this proved to be more expensive. In the 4-storey blocks the timber-framed panels to the external walls of the lower maisonettes carry through to form the framing for the balconies above. The gable end walls in the 11-storey blocks were also the subject of alternative designs. They are not in solid concrete, since experience has shown that such walls, used externally, frequently give rise to trouble due to thermal movement and to difficulties in satisfactory weatherproofing of the joints of facing slabs. These walls consist of column and beam frames with an internal lining of insulating blocks, a cavity and an external cladding of storey height, exposed aggregate, precast concrete slabs.

It may be said that methods or materials investigated in the search for economy will vary as prices and availability vary. This is undoubtedly true, but while the constructional components and methods used for the Picton Street buildings may not slavishly be copied, nevertheless it is equally true that valuable lessons for general application have emerged.

Personnel of the Design Team. Very many persons are involved in the various facets

of the work, but prime responsibility rests with the Architect to the Council, Dr. J. L. Martin [F], and the Principal Housing Architect, Mr. Whitfield Lewis [A], together with the Assistant Housing Architect, Mr. Michael Powell [A] and Mr. A. W. Cleve Barr [A], Senior Architect-in-charge of development, and Mr. H. G. Gillett [A], Architect-in-charge, assisted by Messrs. E. J. F. Clarke [A], P. de Saulles [A] and T. O'Toole [A]. Other members of the Architect's Department chiefly concerned are the Principal Quantity Surveyor, Mr. M. F. Rice, assisted by Mr. R. V. Wiseman and Mr. I. Carter and Mr. A. H. Withers, Finance Officer, assisted by Mr. C. C. Chandler.

Mention should also be made of Mr. J. Croft, formerly Chief Inspector, and Mr. J. Clancey, his successor, of the Public Health Department.

Dr. Weston, Mr. R. F. Broughton and Mr. W. Allen [A] of the Building Research Station, Department of Scientific and Industrial Research, are also closely associated with the scheme.

The appointed quantity surveyors are Messrs. L. A. Francis. The consulting structural engineers, as already mentioned, are Messrs. Ove Arup and Partners.

The Research and Development Department of John Laing and Son Ltd., the nominated contractor, has been concerned with the project from its design stages.

Practice Notes

Edited by Charles Woodward [A]

MINISTRY OF HOUSING AND LOCAL GOVERNMENT. Planning Permissions.

In Circular 58/51 addressed to local authorities in England and Wales it was said that the Town and Country Planning Act of 1947 is an Act for regulating the development and use of land; and the powers which it confers are only available for those purposes. Conditions which have no relevance to planning have no place in a planning permission; planning powers ought not to be used as a sort of universal longstop when other powers are not available. Moreover, it will often be found that matters which are of proper concern to planning are already regulated either by statute or common law. In such cases it is generally undesirable to seek to cover the same ground by attaching conditions to a planning permission. The existence of the condition will not free the developer from his other responsibilities; if the requirements are the same the condition is unnecessary; while if they conflict confusion will result. In general, the powers of the Planning Act ought not to be used to duplicate or alter the impact of more specific legislation, particularly if the result would be to deprive the developer of compensation to which he would otherwise have been entitled.

In dismissing an appeal recently, the Minister said that on the question of powers

he is advised that a local planning authority are fully entitled, when considering an application for planning permission, to take into account anything which concerns the use of land and the effect of that use on neighbouring land, and in his view the fact that further development in this locality might imperil the purity of the water drawn from the area is clearly a relevant consideration. In deciding whether or not to grant the permission applied for, the local planning authority should of course have regard to the legislation specifically concerned with matters of public health and water supplies, and the Minister would agree that it is generally more appropriate to leave such matters to the operation of the particular legislation where this provides adequate safeguards.

TENDERING PROCEDURE. The report of the Working Party on the Building Industry a few years ago stressed that the need for early and full information to all who would be concerned on a building project is more than ever essential in times of full employment. This will serve to remind members that it is good practice to advise builders and sub-contractors at the earliest opportunity of their success or failure in tendering in those cases where the tenders are not opened in the presence of the tenderers.

If submission of priced bills of quantities with tenders is required they should be enclosed in separate envelopes from the tenders. The architect should never open the envelopes containing the priced bills of unsuccessful tenderers, though he may, of course, have access to the bills of the successful tenderer for the purpose of checking them before the acceptance of the tender.

The Practice Committee are in agreement with this procedure.

R.I.B.A. FORM OF CONTRACT.

Retention Money. The Practice Committee have recently considered a suggestion of the Joint Consultative Committee of Architects, Quantity Surveyors and Builders that in the case of reputable contractors chosen, for example, from a selected list for tendering, architects may consider reducing the amount of certified value retained substantially below the figure of 10 per cent mentioned in the Appendix to the Form of Contract.

The Practice Committee are fully in agreement with this suggestion and commend it to members.

R.I.B.A. SCALE OF CHARGES.

Attention is called to clause B.2 of the Scale which requires *prior written agreement* between client and architect as to the percentage to be charged for works to existing buildings. It is important that this clause should be strictly complied with so that no misunderstanding can arise when the architect presents his account.

NATIONAL BUILDINGS RECORD. The annual report of the National Buildings Record has now been published.

Arising out of discussion with the

Ministry of Works it was decided that the Record would be regarded as an autonomous body and the Ministry has decided at present to withdraw the suggestion that the Record should be merged in the Department. The Treasury will continue its support.

The accessions during the year comprised 17,744 photographs and measured drawings, making a total of 443,566 items in the collections up to April 1955.

The Record needs much more financial help not only to produce the photographs which are essential to a proper consideration of each building's claim to government support but also to allow adequate plans and measured drawings to be prepared where buildings cannot be preserved.

The address of the National Buildings Record is now 31 Chester Terrace, Regent's Park, London, N.W.1.

SHOULD ARBITRATORS GIVE REASONS FOR THEIR AWARDS?

There is no obligation on Arbitrators to give reasons for their Awards and it is unlikely that the form of the following Award would be adopted in these days. The Award is dated 9 June 1942.

'Award of Master Gilbert Kymer, Doctor of Medicines and Rector of medical men (medicoram) of London, John Sombrshete, Inceptor in Medicines, and Thomas Southwell, Bachelor in Medicines, surveyors of the faculty of Physic of London, John Corby, practitioner (practicus) in Physic, Thomas Morstede, esquire, one of the masters of the enfranchised art of surgery in London, William Bradwardyne, esquire, Vice-master of the same, Henry Asshborne and John Forde, surgeons enfranchised in surgery, who had been chosen arbitrators in a cause pending between William Forest, complainant, and John Harwe, free surgeon, and John Dalton and Simon Rolf, who had been admitted as barbers solely for the practice of surgery, as regards an alleged error of treatment of a wound in the muscles of the thumb of the right hand. The arbitrators, having diligently considered and fully understood the matter, on the evidence of the parties and the sworn testimony of John Parker, a barber admitted for the practice of surgery only, and also of other trustworthy persons having knowledge of the course of the aforesaid treatment, found that the complainant William Forest on 31 Jan. last past, the moon being consumed in a bloody sign, to wit, Aquarius, under a very malevolent constellation, was seriously wounded in the said muscles and on 9 Feb., the moon being in the sign of the Gemini, a great effusion of blood took place, that Simon Rolf staunched the blood the first time and that afterwards John Harwe with the assistance of John Dalton skilfully stopped the flow, which broke out six several times in a dangerous fashion, and that on the seventh occasion, the wounded man preferring a mutilated hand rather than death, the said John Harwe, with the consent of the patient, and for lack of other remedy, finally staunched the blood by cautery, as was proper, and thus saved his life. Accordingly

the arbitrators declared that the said John Harwe, John Dalton, and Simon Rolf had acted in a surgically correct manner and had made no error, and that therefore they were absolved of all charges made against them by the said William Forest. They further imposed upon the complainant perpetual silence in this matter and, so far as possible, they restored to the defendants, who were guiltless and had been maliciously and undeservedly defamed, the full measure of their good reputation, as their merits in the case required. Further they declared that any defect, mutilation or disfigurement of the hand was due either to the constellation aforesaid or some defect of the patient or the original nature of the wound. This award was made 9 June 1424 in the chapter house of the Friars Minors in London.'

TOWN AND COUNTRY PLANNING ASSOCIATION. Green Belts Policy. The Association has submitted a memorandum on Green Belts to Mr. Duncan Sandys, Minister of Housing and Local Government, following his request for advice on the subject.

The Association has asked the Minister for his approval of the memorandum, and has expressed the hope that he will find it deserving of commendation to authorities and others concerned with planning.

The conclusion of the Association is that the establishment of green belts must be supported by the dispersal of population and industry to new and expanded towns. So long as there are congested conditions in our towns and cities, there will be pressure to permit building on their outskirts, unless there are adequate opportunities for people to find homes and work in the new and expanded towns. The implementation of a green belt policy must depend in the last resort upon an active public opinion. If this opinion does not exist there is always the risk that undesirable development will sooner or later be permitted. For instance, a great deal more housing development has been permitted in the metropolitan green belt than was originally contemplated. Active steps should therefore be taken to foster a favourable public opinion.

The Town and Country Planning Association will continue to lend all its weight to such a policy.

LAW CASES

Penney v. Berry. Cellar-head in Pavement Nuisance. A local authority raised a pavement and reset in it a metal slab covering a cellar hole. Before the reconstruction the slab and the flag-stones supporting it were in good condition, but after the slab had been reset it projected above the pavement. The plaintiff tripped over the projection and brought proceedings against the frontager, claiming that he had not fulfilled the obligation put on frontagers by section 35(1) of the Public Health Acts Amendment Act 1890 (the local authority having adopted that Act) to keep the cellar-head and supporters in good condition and repair.

The Court of Appeal held that although

the cellar-head constituted a public nuisance, the nuisance was due to the lay-out of the pavement as reconstructed by the local authority and not to the condition of the cellar-head and supports; the frontager had no power or duty to abate the nuisance which the local authority had created and was not liable for the injuries sustained by the plaintiff. (1955. 1 W.L.R. 1021). (Note. It is thought that a 'cellar-head' is another name for a coal plate.)

Cotton v. Wallis. Claim for Architect's Fees. In this case the plaintiff had claimed in the County Court for the balance of fees due to him in connection with the building of a house for the defendant. The defendant counter-claimed for damages alleging that the plaintiff had been guilty of negligence in not properly supervising the building work.

The County Court Judge, after inspecting the house, awarded the plaintiff the balance of the fees and dismissed the defendant's counterclaim. From this decision the defendant appealed to the Court of Appeal.

By a majority the Court dismissed the defendant's appeal, but Lord Justice Denning in dissenting from this decision said that among the defects complained of by the defendant were paraffin stains on tiles in one of the rooms, woodworm, and plastering and paintwork said not to be as they should have been. The plaintiff drew the builder's attention to some of these. The County Court Judge had said that because the price of the house was low, the builder could not be expected to build it in a perfect manner.

His Lordship said that as he read the contract, if an architect called upon a builder to make good defects, the builder should do so and the architect had no dispensing power. He must hold up the final certificate until the defects were made good. That was not done and though the builder did not remedy the defects, the plaintiff called upon the owner to pay the builder.

His Lordship said it was the duty of an architect to the owner to see that the builder did the work properly. If he let shoddy work pass or work was scamped, he did not do his duty. His Lordship said he would have found that the County Court Judge had misdirected himself and that his

decision on the defendant's counter-claim was wrong. He would have ordered the matter to be remitted to the County Court Judge to assess the damages.

The appeal was dismissed by a majority, the defendant being ordered to pay £10 of the plaintiff's costs of the appeal. (THE ESTATES GAZETTE, 5 November 1955.)

Poole Corporation v. Blake and Others. Private Street Works—Cost of Surface Water Drainage. This was an appeal to the Divisional Court of the Queen's Bench by the Poole Corporation against a decision of Quarter Sessions that the cost of surface water drainage should be excluded from the expenses charged against frontagers for works executed under the Private Streets Works Act 1892.

The Divisional Court held that the Corporation could not order frontagers to improve or enlarge a sewerage system which was already in existence and had been so for many years. The drainage system referred to was constructed in 1923.

The appeal was dismissed with costs. (THE ESTATES GAZETTE, 19 November 1955.)

Peterborough Corporation v. Holdich and Another. Provision of Dustbins. This case was an appeal to the Divisional Court of the Queen's Bench from a decision of the magistrates not to make an order requiring either the landlord or the tenant of a dwelling-house to provide a dustbin for the premises. The Corporation had served notices on both the landlord and tenant requiring them to provide a dustbin in accordance with the powers given by the Public Health Act 1936.

The magistrates had held that as the making of an order under the Act was permissive and they had refused to make an order against the landlord, they were not bound to make an order against the tenant. From this decision the Corporation appealed.

The Divisional Court held that on a proper reading of the Act, once it had been proved that there was no adequate dustbin, and that the landlord and the tenant were before the Court, the Court had a duty to make an order against one or other of them.

The appeal was allowed and the case was sent back to the magistrates accordingly. (THE ESTATES GAZETTE, 26 November 1955.)



The Building Exhibition

Some New Ideas, Methods and Materials

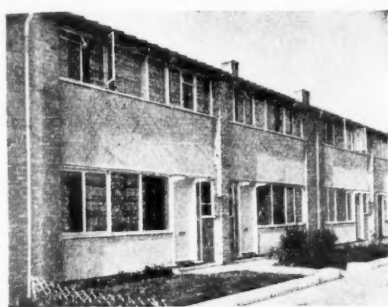


Fig. 1. Crosswall construction houses at Canterbury which gave an average saving of £64 per house

TO 'DO' THE BUILDING EXHIBITION thoroughly demands nowadays considerable powers of physical endurance. This year's exhibition, the twenty-sixth, filled the whole of the Olympia premises. Merely strolling round—with intervals for rest and refreshment—occupied most of one day.

Talking with architects who were resting and refreshing themselves in the R.I.B.A. Club we decided that architect visitors fell into three classes: (a) The thorough, i.e. those who had studied the guides and forecasts published by the technical periodicals and who had marked certain things they wanted to see, usually in relation to some forthcoming building project, (b) The strollers who toured without plan, letting their eye be captured here and there by some gadget, material or well-designed stand, (c) The curious, a class intermediate between the two foregoing, who paid more than one visit in a search for new ideas in the various fields of technique.

This article is written for the third class, for those architects (the vast majority) who have enquiring minds and who take an objective interest in the solving of new problems or in new ways of overcoming old ones, whether they themselves are likely to meet with them or not. We shall therefore have to ignore many of the firms whose products are the mainstay of the industry in having been specified for decades, even in some cases for longer than a century. These firms produce the basic elements of building—bricks, cement, steel, timber, the non-ferrous metals, sanitary goods and heating appliances. They form the essential solid background to the newer developments and require no praise from us.

Government Displays. The Ministry of Housing and Local Government in their display concentrated on two developments, crosswall construction of terrace housing and maisonettes. The exhibit showed the principles of crosswall construction and showed how they had been applied in actual schemes of which we illustrate one in front

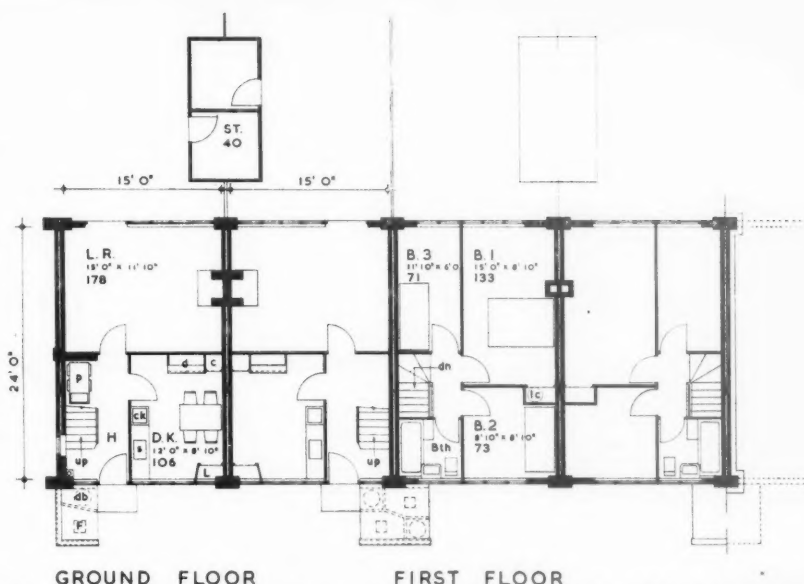


Fig. 2. One of three type plans of crosswall construction houses in the exhibit of the Ministry of Housing and Local Government

view (Fig. 1) and another in plan (Fig. 2). The cost savings per house over normal methods are given. Applied to a scheme of four storey maisonettes there was a saving of £188 per maisonette. Interesting working drawing details were also shown.

The Ministry of Works exhibit was aimed at builders rather than architects. It dealt with site organisation, the use of tower cranes, methods of preparing and laying concrete and similar matters which influence the cost and speed of the job. Some humorous drawings drove home these points.

B.R.S. also dealt with job organisation, emphasising the importance of pre-planning. Their exhibit also showed uses of pulverised fuel ash and dealt with such matters as the design of ball valves, smoky chimneys, school heating and ventilation and a new type of tunnel construction. They also illustrated work now being done in conjunction with the National Federation of Building Trades Employers, including a survey of domestic boiler chimney trouble and the use of aerated mortar and renderings.

Curtain Walling. The principal fundamental problems of curtain walling are the keeping out of driving rain, achieving adequate fire-resistance and preventing condensation from inside the warmed building forming within the panel structure.

Since the metal window makers turned their attention to the design of curtain walling, the problem of excluding driving rain has been overcome. The Windogrid system of Henry Hope and Sons Ltd.,

the Wallspan of Williams and Williams Ltd. (shown on a fine stand designed by Yorke, Rosenberg and Mardall [FF]) and the system of John Thompson Beacon Windows Ltd. (on another fine stand, by George Whitby [F]) and many others are sound technical achievements taking care of wind pressures and rustproofing, as well as rain exclusion.

It is the panel filling which is the most troublesome feature, and here the stand of the Cape Asbestos Company Ltd. (114-116 Park St., W.1) provided much useful guidance. On it were several composite constructions faced variously with aluminium sheeting (with Alchrome finish), stove-enamelled steel sheet, glass and Cementone in which Asbestolux slabs provided fire resistances varying from $\frac{1}{2}$ hour to 2 hours. Rocksil gave added thermal insulation and bituminous paper the vapour barrier. It seemed clear that, given the basic requirements, this firm can produce a variety of satisfactory constructions to meet a variety of panel walling conditions.

Hitherto glass facings in the panels of curtain walling have been made either with coloured glass, such as black glass, or with painted backgrounds behind plain glass. A new development of great possibilities in this direction was on the stand of Pilkington Brothers Ltd. (Fig. 3). This is a method of painting and toughening glass which permits coloured designs—or lettering—to be used in plate glass. It employs the silk screen process for incorporating the coloured design actually in the glass. An exterior panel wall on the stand showed an interesting design in red and black, by

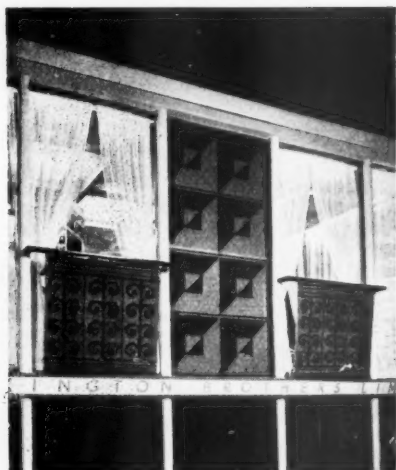


Fig. 3. Coloured wall panel and balcony fronts in fired-toughened glass on the stand of Pilkington Brothers Ltd.

Miss Peggy Angus, as an example. The glass is 'fired-toughened' which is not quite so strong as armourplate; the colours of the designs are of course entirely permanent. Perhaps we may expect the curtain wall movement, which was an outstanding technical feature of the exhibition, to appear in 'glorious technicolour' as a result of this development.

Fire Protection. Returning to the stand of the Cape Asbestos Company Ltd. we noted some remarkable ceilings using Asbestolux panels which give $\frac{1}{2}$ -hour, 1-hour and 2-hour overall fire resistance to floors of unprotected steel or timber (Fig. 4) according to some official tests by the Joint Fire Research Organisation of D.S.I.R. This seems to have some unusual possibilities such as giving a timber floor—including an existing one—a fire-resistance equal to the normal r.c. floor and rendering light steel roofing, which is specially prone to rapid collapse from a fire beneath, appreciably fire resisting.

Also supported by J.F.R.O. tests is Milsom's (Vermiculite) Cladding (Bury Wharf, Bury Street, Ruislip, Middlesex), an ingenious system of 'wrapping' vermiculite concrete slabs round stanchions and beams. The slabs are lightly reinforced with wire and are cast with vee-joints, the distances between the joints corresponding with the face dimensions of the steel sections. On the job the slabs are fractured along the joints and folded round the member, the reinforcement holding the face pieces together at the corners; at the corner where the slabs meet, the reinforcement is twisted together. This leaves the corners partly exposed and these are pointed up with hemihydrate gypsum plasters. The slabs are in lengths which are easily manhandled; joints between lengths are pointed up. The slabs can be supplied fair faced for distempering or rough faced for plastering. For beam casing, mild steel brackets are supplied for holding up the vertical faces internally. A $\frac{1}{2}$ in. thick slab

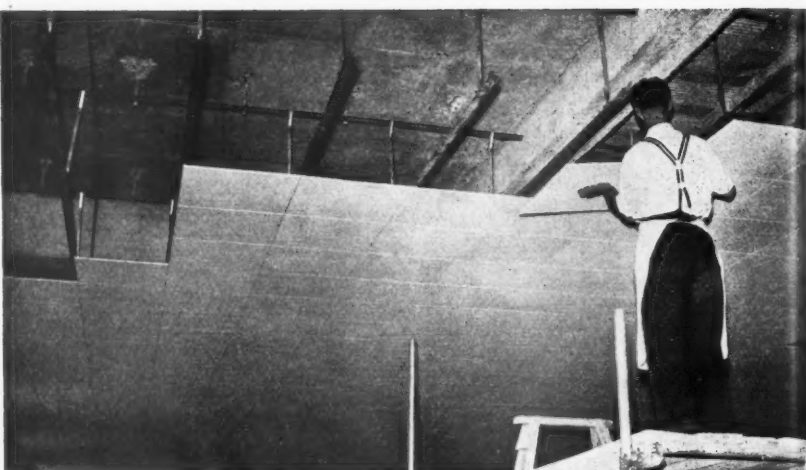


Fig. 4. Fixing fire-resisting Asbestolux ceiling panels. They are 24 in. square and removable

gives 1 hour resistance, a 1 in. 2 hours and a $2\frac{1}{2}$ in. 4 hours. The makers claim that the overall cost shows a remarkable saving over casing with solid concrete.

Generally, we noted a growing awareness of the technique of fire protection, a view with which the Fire Protection Association agreed; they reported a greatly increased attendance at their stand and a heavy demand for their numerous free publications. The revised Model Building Byelaws, with their requirements in respect of fire resistance, are to some extent responsible for this, but it is true to say that the application of fire protection technique has followed from the large volume of fundamental research carried out and published in recent years by the Joint Fire Research Organisation of D.S.I.R.

Frog Up or Frog Down. To provide further evidence on this question, which was the subject of a recent B.R.S. Digest, the London Brick Company Ltd. (Africa House, Kingsway, W.C.2) had a large compression testing machine on their stand with which at regular intervals they crushed specimen brick columns. This was a popular attraction and the test figures for columns built frog up and frog down, as well as some built with cellular bricks, were there for all to see. The results were surprisingly close, frog up (with frogs filled) coming highest, cellular bricks next and frog down (with frogs unfilled) lowest. But even the frog-down figures were six to seven times above the permissible stresses for 2-storey house walls so that any fears of weak frog-down walls in houses or in storey-height panels of framed buildings which architects might have are clearly groundless. And everyone knows that permissible stresses are always on the safe side.

This stand also had some interesting examples of post-stressed brick lintels in which the bricks are strung together with a threaded rod through their centres which is tightened with nuts at the ends. One such lintel of 'soldier' bricks was 9 ft. long and

supported a wall above. A reinforced brick cantilever staircase, with the bricks laid flat, was also on view.

An Automatic Garage Door. For the lazy man who dislikes getting out of his car to open the doors of his garage (an unpleasant experience in a heavy downpour), the Bolton Gate Company Ltd. (Bolton, Lancs.) showed a remarkable fitment which allows him to open the doors from inside his car. There are two types. In one a magnetically operated switch is buried in the drive; an electro-magnet is fixed to the front of the car and as the car owner drives over the buried switch he presses a button on his dashboard and the doors open. In the other a key switch, operated by a house key, is fixed in the drive gate post. The owner stops his car at the post, extends an arm and inserts and turns the key, thereby opening the doors. A push button inside the garage closes and secures the doors. The device, which is called the Bolton Dryvin Door Operating Gear, can be installed on an existing garage in a few hours and is not expensive.

Folding Partitions. Also shown by the Bolton Gate Company was a folding partition covered on both sides with leathercloth. In principle this is a collapsible gate, moving very easily in an overhead track and floor channel, but is entirely covered with a washable decorative material which folds concertina-wise when the partitions are opened. It takes up a great deal less wall space when open than does the usual folding-sliding door, does not stick and can be operated in a few moments. The same company also showed a wide variety of doors and gates including overhead rolling garage doors (which can also be electrically operated) and factory doors operated by photo-electric cell, a useful device where trucking is done.

Windows and Glazing. To define precisely a window nowadays is not easy because it ranges from the glass brick wall to an

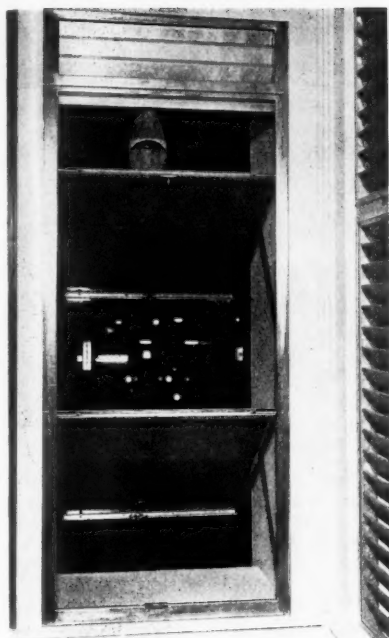
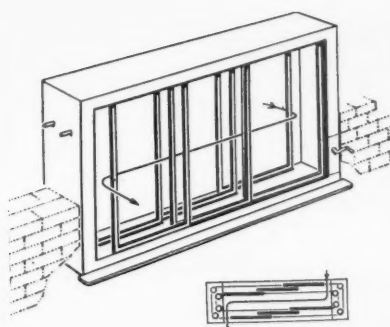


Fig. 5. The Clearview wall panel of Henry Hope and Sons Ltd.

arrangement of louvres. Under the above heading we describe several interesting designs which caught the eye on several stands. The term 'arrangement of louvres' might apply to the Clearview wall panel of Henry Hope and Sons Ltd. (17 Berners Street, W.1). This is for tropical use and has been specially designed to diminish solar heat and glare while permitting full ventilation (Fig. 5). The unit can extend from floor to ceiling with movable or fixed louvres at top and bottom, the centre being occupied by two panels which are 'glazed' with asbestos composition board and which, when opened, give a clear view without a transom at the eyeline while acting as sun breakers. The unit has an internal window board and external sill. Units can be joined by mullions so that, if required, one can make the whole wall to open.

Messrs. Hope's have made a special study of window needs in the tropics and their stand showed a variety of designs to meet all sorts of conditions of sun and rain. Their Malta window, introduced at the last exhibition and shown again in this one, has proved very popular. They also showed a new design of metal casement incorporating double glazing which should be serviceable in colder climates.

Withstanding its own private shower of rain was the All Weather window on the stand of John Thompson Beacon Windows Ltd. (Fig. 6). It is a double, horizontally sliding window which permits a free flow of air under the most unpleasant external climatic conditions. It is especially suitable for hospitals, sanatoriums and clinics and, where it can be afforded, in houses. The same firm also showed a simple tradesman's delivery hatch costing complete



AIR-FLOW
WHEN PARTLY OPENED

Fig. 6. The Beacon all-weather window of John Thompson Beacon Windows Ltd.

£5 12s. 6d. It is all of metal and, once the goods are inside, the door automatically locks, thus preventing theft.

The Crittall Manufacturing Company Ltd. (Braintree, Essex) showed a new aluminium double hung sash with plastic weather-stripping. The fact that the double hung sliding sash is returning to favour, though in a modernised form, was abundantly evident on many stands of window manufacturers. Among many we noted two by Williams and Williams Ltd. (Reliance Works, Chester), one of which had counterweights and the other Unique balances; both were of aluminium. It appears that quite a few architects are providing sash windows in new school buildings.

The stand of Pilkington Brothers Ltd., mentioned earlier in this article in connection with curtain walling, contained a number of items of interest to the seeker after new ideas. One was a single pane which extended over two storeys (Fig. 7). This pane is 16 ft. high by 7 ft. wide; at the edge of the upper floor was a flower box. Another idea was to make guard rails to picture windows of armourplate glass, thus preserving the 'all glass' effect. It bends a little when one leans on it, ability to bend being a characteristic of armourplate glass, but we were told it was more than strong enough to do its job of protection. A third idea was a stair balustrade consisting of strips of armourplate glass.

The centrepiece of the stand was a large model of 'The Soho Project', a futuristic version of Soho designed by Messrs. C. A. Jellicoe [F], Edward D. Mills [F] and Ove Arup and Partners. The stand itself was an ingenious piece of construction worthy of attention in its own right. The whole stand was designed by S. M. Sternfeldt [L].

The London Sand Blast Decorative Glass Works Ltd., now coming into their own again with the ending of austerity building, had on view a fine exhibition of their special craftsmanship. They are making for Mr. Basil Spence, A.R.A. [F], the great engraved glass screen at the west end of Coventry Cathedral. While most of their techniques are old they had on view a new one—coloured silvering—which has extensive possibilities in design with mirrors.



Fig. 7. A single pane 16 ft. high extending over two storeys on the stand of Pilkington Brothers Ltd.

Timber. A special combined exhibit with the theme 'Timber as a Modern Building Material' was one which is not easy to describe but which required to be looked at. Only examination could convey the design potentialities of the many decorative hardwoods or the structural possibilities of laminated and framed construction. The exhibit was a co-operative effort of the Forest Products Research Laboratory of D.S.I.R., the Timber Development Association, the Federation of Home Timber Associations and several Dominion and Colonial organisations.

Laminated construction was well illustrated in the British Columbia section by a series of arched frames carrying a Western red cedar roof, designed by Mr. A. Roscoe-Hudson [4]. The T.D.A. had an exhibit of their rigid frame construction which makes use of metal connecting plates and tooth-plated connectors for farm buildings, village halls, pavilions, etc. The Federated Home Timber Associations (75 Cannon Street, E.C.4) displayed the many possibilities of home-grown timber in structural work, panelling, gates and fencing, garden furniture, etc.; they will advise architects of the names of firms who specialise in these crafts in various localities.

Forming part of this special exhibit was a display of French woodworking by *Les Industries Françaises du Bois*. One item in it was a new design of 'sliding and rotating' window, that is, a two-unit horizontally sliding window in which both units can be turned to open as inward opening casements. The window is not yet on the British market and we understand that the designers are looking for licencees.

A comment on the value of pressure preservation of timber was provided by a notice on the stand of Hickson's Timber Impregnation (G.B.) Ltd. (Ings Lane,

Castleford, Yorks) which said: No dry rot in your new house costs only 1s. per month on mortgage repayments.

Bellrock. These self-faced storey-height plaster panels, made by Bellrock Gypsum Industries Ltd. (200 Westminster Bridge Road, S.E.1), which, though a post-war development, have already achieved remarkable sales all over the world as well as in this country, appeared at the exhibition in new forms. The panels are now tongued and grooved, which dispenses with the pouring and clamping of the vertical joints, and can be erected at a rate of up to 6 yd. per man per hour of finished wall. A preformed trough at the head of each panel receives a peripheral beam, dispensing with lintels over openings up to 6 ft. wide. B.R.S. tests have shown that the normal storey height panels have a bearing capacity of 6½ tons per ft. run with mortar joints and 4½ tons with plaster joints.

Their newest development, however, is a waterproof panel which permits single skin external wall construction. The outer face of the slab consists of a bituminous plaster which is keyed in two patterns, one to take a rendering and the other to take a brick tile simulating facing brickwork. Also the wall panels can be stiffened with rods so that panel walls up to 30 ft. high are feasible.

Plasters and Mortars. Plaster mix emulsions such as those used by Bellrock look like having a considerable influence in building techniques. Hitherto we have regarded plaster as a material which has an aversion to moisture. But a waterproof gypsum plaster opens up new fields. Berry Wiggins and Company Ltd. (Field House, Brems Buildings, Fetter Lane, E.C.4) had on view a special bitumen emulsion for mixing with and waterproofing gypsum plasters. This does not delay setting time or affect expansion on setting. The same firm showed a bitumen emulsion for vermiculite-cement screeds. This prevents the absorption of water after the screed is set and before the roof covering, such as felt or asphalt, is laid. It does not render the screed waterproof but merely prevents the vermiculite absorbing water.

Mortar plasticisers are today almost a commonplace, although they appeared at the last exhibition, but there are still many architects who do not specify them. A plasterer at work on the stand of Tretol Ltd. (Tretol House, The Hyde, N.W.9) could be observed placing a one to six cement-sand rendering which normally would be too 'short' to work at all easily. This contained Tretol Morta-Mix which cost 2s. 6d. per cu. yd. Otherwise workability can be obtained by adding lime to the mix at a cost of 14s. per cu. yd. Tretol Ltd. say that their product gives greatly improved adhesion and tenacity, reducing appreciably mortar droppings in cavity walling.

Polythene Tube. It was something of a surprise to find polythene tube on the stand of Yorkshire Copper Works Ltd.,

but they admit there are instances where polythene tube may be less costly than and as suitable as copper, and they emphasise that their special skill is an affair of tubing and fittings rather than of an individual material.

They have evolved a new fitting for joining B.S. polythene tube in either normal or heavy gauge. It is made from a new, specially strong type of Polythene and has been called Plastronga. This joint gives an all plastic pipeline, is leak-proof and without any restriction of the bore.

Polythene tube is specially suitable for buried cold water supplies (it will not withstand hot liquids) because it resists the corrosive effects of acid waters, manures and fertilisers and because it can be pulled through the ground by means of a mole plough, a method developed some years ago by the Yorkshire Copper Works for laying Yorkalton copper waterpipes to outlying buildings in agricultural areas. Because polythene tube can be obtained in 500 ft. lengths, few joints are needed. Plastronga fittings are now available in couplings and equal tees in ½, ¾, 1 and 1½ in. nominal bore sizes. Other sizes are being developed.

Shires and Company (London) Ltd. (Greenbottom Works, Guiseley, Yorks.), whose moulded Lynx plastic flushing cisterns are well known, have now gone in for polythene flushing mechanisms and ball valve floats. Their special brand of polythene has the registered name 'Shirene'. The flushing mechanism, the 'Kingfisher', is moulded in it, is non-corroding and much quieter in operation than metal mechanisms. It has been designed to be easy starting and the semi-flexible Shirene cushions any water shock. The material is unaffected by climatic conditions, acids, alkalis and sea water. The 'Poly-float' abolishes leaking and should be virtually everlasting.

Vermiculite. Entirely a postwar newcomer, vermiculite is now well established in the British building industry. It is used widely in renderings, plasters, roof insulation and tank laggings. Its properties are so well known that we need do no more than publish a photograph of one stand, that of Pyrok Ltd. (401-404 Montrose Avenue, Slough, Bucks), and we publish it chiefly to illustrate the ingenious roof design (Fig. 8). This roof, and of course the whole stand, was designed by Mr. Nigel Farrington, A.A.Dipl. [A]; it consisted of a frame of aluminium tube supporting a pyramidal ceiling which is formed of coloured and textured Pyrok panels. Designed primarily to be decorative and thereby to catch the eye of the visitor—which it did very successfully—it also suggested a new form of acoustically absorbent and decorative ceiling, in which the sound absorbing property and self-coloured finish of Pyrok would be valuable elements.

Automatic Light Control. Automatic balancing of the artificial illumination of an interior with the variations in daylight coming through windows or roof glazing



Fig. 8. The novel roof on the stand of Pyrok Ltd., designed by Nigel Farrington [A]

so that correct lighting is constantly ensured is a kind of Wellsian idea. That it is quite a practicable one was demonstrated on the stand of the Electrical Development Association by Sargrove Electronics Ltd. (Alexandra Road, Hounslow, Middlesex).

The artificial illumination is controlled by 'master daylight sensing units' which are placed in duplicate (one for use and one as standby) on the roof. They are so designed that direct sunlight cannot enter them, are weatherproof and fitted with de-icing to eliminate errors due to snow and ice. In smoky areas the glass of the sensing units can be kept clean by automatic water jets, but the makers advise regular cleaning with the roof glazing. The unit continuously senses the level of daylight and is arranged to average out abrupt changes or to ignore variations of short duration.

The lighting circuits must be grouped as far as possible into areas receiving the same amount of daylight; for example, deep interiors with windows on one side only would require separate circuits for the range of lights near the window and for the inner range or ranges of lights. For this reason the makers suggest that their system is best applied to new buildings or when an existing building is to be rewired.

Each control unit is provided with two selector switches, 'auto on', 'light off' and 'manual on'. The light off position is to cater for holiday periods or to isolate the circuit and the manual on position for routine checking by maintenance engineers.

The makers claim that their system gives a considerable cumulative saving of electricity because no lights can remain on accidentally when there is sufficient natural lighting and, in the wiring, numerous manual switching points are eliminated. The lights come on automatically in the event of cloudy or foggy conditions in the middle of the day and go off again should the afternoon become bright. In factories which work continuous shifts the system is obviously advantageous. In factories operating day shifts only, time switches can be used or the manual control. Also where certain sections of a factory are liable to work late, the circuits can be grouped to allow for this.

Another point which the makers discussed with us was psychological. With the lights going on or off there may seem to be a sudden brightening or diminution of light. This can be met by duplicating the system and giving the sensing units different settings so that the lights come on and off in stages.

Heating Appliances. Under the combined pressures of ever-rising fuel costs and smoke abatement, heating appliances are showing remarkable advances. This movement started soon after the war, is continuing steadily and appears likely to continue for some years yet. The aim is to achieve ever higher efficiencies in individual appliances and to make them warm as much of the dwelling as possible.

The Redfyre Convactor heating stove is a new Ministry approved appliance for which the makers, Newton Chambers and Company Ltd. (Thorncroft, Sheffield) claim an 84 per cent efficiency. It is of continental type in having a chrome steel fire body and no firebrick lining. There is a louvred outer casing through which warmed air is emitted. Its heating capacity varies from 3,500 cu. ft. to 5,550 cu. ft. according to the fuel. Average weekly fuel consumption is 1 to 1½ cwt. The rate of burning is precisely controlled by a regulator which operates simultaneously the air intake and the flue damper. Extra air is also admitted to the flue to reduce excessive burning when the flue pulls strongly in high winds. A hinged cover on top gives access to a ring for top fuel filling and, if required, for boiling a kettle. The appearance is good and colours are black or copper lustre or light cream mottle. Prices range, according to finish, from £26 18s. to £34 19s.

The same firm is marketing a new coke burning fret for conversions in smokeless zones. It is in 5 colours and in sizes for 12, 14, 16 and 18-in. openings.

Smith and Wellstood Ltd. (Bonnybridge, Stirlingshire) had on view a new open-fronted stove type of space heater (Fig. 9) which is of good appearance and named the Vitesse. Intended to give an open fire effect with the efficiency of a stove, it has a restricted throat which reduces room draughts. The projection of the heater ensures the maximum of convection. A built-in spark guard which comes down like a portcullis is an excellent feature. This, with the accurate air control on the ashpit front ensures that the fire can safely be left burning unattended for long periods. There is a shaking grate and dumping arrangement. The prices are £17 15s. and £18 12s. 6d. according to the finishes, which are metallic grey, silver green and copper. The average heating capacity is 3,000 cu. ft.

The Esse Century cooker, by the same firm, is a new large insulated model selling at £118 2s. 6d. It has 3 plates and 2 ovens and can operate a 40 gal. tank and towel rail. A novel feature in a solid fuel cooker is the provision of a control panel.

Ideal Boilers and Radiators Ltd. (Ideal Works, Hull) have introduced a new model domestic boiler, the O-XLC, which

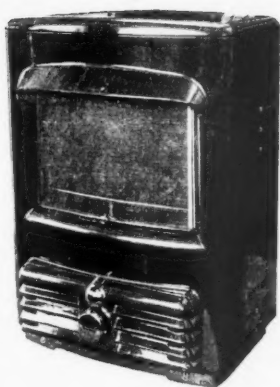


Fig. 9. The Vitesse stove of Smith and Wellstood Ltd. has a built-in spark guard

is to replace their O-XLB from 1 January next. This embodies a number of improvements which include a new style of smokehood and damper, a redesigned top plate with a large, hinged fuelling lid, an improved and easily operated rocking grate with a front panel screen which prevents ash flying when the grate is rocked, and positively-locking handles to the two doors. The price remains the same at £15 7s. 6d. for grey mottle finish and £16 15s. for cream mottled. Also on the stand was one of the firm's O-DE models which at £10 5s. in grey mottle enamel is probably the cheapest domestic boiler on the market. We were told that it sells in enormous quantities.

A new stove type space heater with back boiler was produced by Allied Ironfounders Ltd. (28 Brook Street, W.1) just in time for the exhibition. This looks like an ordinary well-designed stove and one would not suspect the existence of the boiler (which can warm 40 to 45 sq. ft. of radiator surface or supply a 30 gal. hot water tank) because the tappings are at the back. This last is a good point because when the plumber has fitted flow and return to side tappings the effect can rarely be described as decorative; he may find back tappings more awkward to connect—but who pays the bill, anyway? This, the Rayburn Room Heater, costs from £23 to £26 according to finish and burns any fuel for ten hours a fill. The boiler output is 8,000 B.Th.U.s per hr. and the convection space heating capacity 2,000 cu. ft.

The Rayburn Open Fire (Fig. 10) is specially intended for those wide, open fireplaces in old houses whose owners also want modern fuel efficiency. It can stand in the fireplace opening of a period room without looking out of place. The cost is £24 (16 in. size) and £25 (18 in. size). It is continuous burning, has a throat restrictor and air control. The makers say it thrives on smokeless fuels.

A more modern-looking Rayburn convactor fire (Fig. 11) emits warmed air from the cavity round the fire back through



Fig. 10. The Rayburn continuous burning fire for open fireplaces

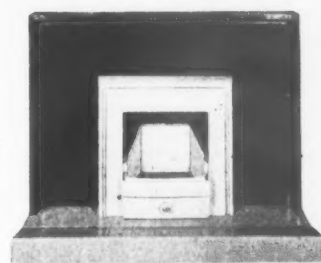


Fig. 11. The Rayburn convactor fire emits warmed air round the frame

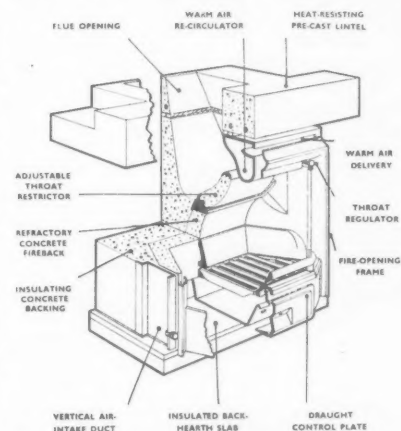


Fig. 12. The Mark III Finch Fire Unit is supplied complete for building in. A back boiler model is also marketed

concealed slots in the frame. This model also has an adjustable throat restrictor and spinwheel air control. It looks like an ordinary fireplace but provides far greater warming for the fuel consumed. The price is £25.

The Mark III Finch Fire Unit (Fig. 12) by B. Finch and Company Ltd. (Belvedere Works, Barkingside, Essex) might be



Fig. 13. The Agamatic 38/80 domestic boiler for the medium-sized home

described as an all-in fireplace construction in that it embodies an insulating concrete backing, heat resisting lintel, insulated hearth slab, adjustable throat restrictor, warm air convector, draught control and, if required, a back boiler. This is a praiseworthy attempt to see that no heat leaks away in odd places and that the very maximum possible gets into the room. It is supplied as a self-contained unit which can be built straight into a brickwork opening without any back filling with brick rubble and mortar. The fire opening is reduced in height which, the makers say, lessens the amount of air drawn from the room down to as little as 2,500 cu. ft per hour.

The non-boiler model costs £16 and the back-boiler model £19 4s., with some small extras for such things as gas ignition and superior finishes. The non-boiler model has a room heating capacity of 2,500 cu. ft. and the back-boiler model one of 2,000 cu. ft. plus a direct domestic hot water supply for a 25-30 gal. cylinder.

Radiation Group Sales Ltd. (Radiation House, Stratford Place, W.1) had on view for the first time their Parkray open fire, one model of which is a tenant's fixture, and their Heatmaster, a solid fuel appliance which does the cooking, provides the hot water and also warms the whole of a small house by convection. The latter was developed in co-operation with several local authority architects. Both these appliances have been described recently in the JOURNAL.

An exceptionally clean-looking boiler was the new Agamatic 30/80 (Fig. 13), made by Aga Heat Ltd. (20 North Audley Street, W.1) and specially designed for hot water supply in the small to medium house with power to spare for some central heating. It sells at £42 10s.

Tucked away in a gallery was a novel form of gas convector of Dutch origin. This is the Drugasar for fitting on an outside

wall. At the back is a balanced flue outlet which draws in combustion air and emits waste gases so that none of the latter are discharged into the room. Heat emission is by convection and radiation and the makers claim a 75 per cent efficiency. There are seven models with outputs from 11,700 to 44,500 B.t.u.s per hour. The United Kingdom representative is Mr. F. A. Borchardt, 3 Chesterfield Road, W.4.

Heat Pumps. In our review of the last exhibition we prophesied that production models of domestic heat pumps would be on view at this exhibition. We were right. Brentford Electric Ltd. (Kidbrooke Park Road, Kidbrooke, S.E.3) had three models on view. One is for domestic use providing hot water, refrigeration, larder cooling and airing cupboard heating. Another gives air for space heating or cooling in addition and a third model is a cooler for dairies, fruit stores, etc. All are in mass production. Ferranti Ltd. (Hollinwood, Lancs.) showed their Fridge-Heater. Domestic Heat Pump and Domestic Installations Company Ltd. (74 Earls Court Road, W.8) had on view two models, incorporating new features.

Inertol Colourless Liquid. This is a water-repelling solution for external application to stone, concrete and brickwork. The makers claim that if the liquid is applied to concrete it not only prevents too rapid drying out but also tends at a later stage to prevent shrinkage. There is no interference with aeration and moisture is able to dry out. The solution can be applied either with a soft brush or a spray gun. It is made by Messrs. Inertol Company Ltd. of Hull, whose London office is at 348 Upper Richmond Road, Putney, S.W.15.

A Joint for Branch Wastes. The FF joint has been designed to simplify the jointing of branch wastes to the cast iron stack, and it is applicable to wastes of copper, lead or steel. The method of assembly is, first to slip a rebated collar over the end of the branch pipe to be jointed, then to fit a purpose-made ring which is rebated to engage in similar rebates on the branch formed on the stack pipe. Screws on the collar engage with tapped holes on the stack pipe branch, and all that needs doing to make the joint tight is to screw up. It is stated that this FF joint will withstand pressures far in excess of British Standards requirements and those of building by-laws. Federated Foundries Ltd. (75 Hawthorn Street, Glasgow, N.2, and 4 Stratford Place, London, W.1.).

Unique Balance for Chalkboards. It was only to be expected that the advantages of the Unique spiral balance for windows would be extended to other applications, and on the company's stand they showed the principle as applied to chalkboards. Rectangular uprights contain the mechanism, and sliders are attached to the chalkboard which can therefore be raised or lowered easily and will remain in position. Long chalkboards are supported on each side but wingboards are attached by hinges

to their support and so can be swung backwards or outwards. Various combinations are possible, including the tandem form. The makers are the Unique Balance Company Ltd. Yeovil (West Hendford, Yeovil).

Precast Concrete Sill Units. Type A of these units is intended for wood windows and metal windows fitted into wood surrounds. Type B is for metal windows fitted into brickwork, in which case fixing is by means of plugs cast into the sills to match the holes in the base of the windows. In addition to the usual drip near the outer edge there is another drip so placed that it lies over the cavity of a cavity wall and thus prevents any possibility of moisture passing under the sill to the inner leaf. At present internal sills can be had in lengths up to 7 ft. 6 in., and in various plain colours and in terrazzo. External sills can be supplied in fair-faced concrete, Snowcrete, artificial and reconstructed stone. W. P. Banks Ltd. (Dunton Green, Sevenoaks, Kent).

Weyroc. In addition to the well-known plain type there were exhibited three other types; the paper-surfaced which will take a good finish without filling; the plastic-surfaced which needs no finishing except perhaps wax polishing if required, and the veneered type showing English oak on one side and sapele mahogany the other.

The plastic finish is firmly bonded during manufacture and will withstand steamy and moisture-laden atmospheres. Manufactured by the Aircrow Company and Jicwood Ltd. (Weybridge, Surrey).

Perspective Drawing by Machine. A device which permits the rapid setting up of even the most complicated perspective drawings by relatively unskilled draughtsmen was shown by W. G. Pinner and Co. (1 York Road, Birmingham 16). It is the Forster Perspektiv-Automat (Fig. 14), a Swiss invention which has been so recently introduced into Britain that the Board of Trade have not yet decided what import duty, if any, to impose. Before the exhibition the JOURNAL asked an eminent architect, whose office prepares many perspectives, to examine it. His report was most favourable in spite of the price of the machine which will be between £200 and £230 (according to Board of Trade ruling). The makers claim that the machine soon pays for itself by substituting rapid work by a junior draughtsman for lengthy work by a highly-paid one.

There are three basic components: (a) a vertical stand with a drum for holding the elevations from which the perspective is to be made; (b) an adjustable rod with, at one end, an optical arrangement for projecting a circle of light; and (c) a horizontal tube holding an adjustable mirror at its end and moving up and down a pillar. In the base of the stand holding the rod (b) is a circle of transparent material marked with cross-lines.

To use the instrument the elevational drawing is wrapped round the drum and



Fig. 14. The Forster Perspektiv Automat, a machine for the rapid setting up of perspectives

the horizontal rod (b) is moved up or down until the horizontal marker on the slider coincides with the chosen observation point on the drawing. Previously the plan drawings have been taped down on the drawing board at the required angle, and the paper on which the perspective is to be drawn is taped directly under the mirror. The base with its cross-lined circle is then moved about over the plan until the crossing point coincides with the chosen part of the plan. The optical system throws on to the mirror a beam of light which is reflected to the drawing paper and reproduces the crossing lines. The intersection of these crossing lines having been marked with a pencil the movable base is shifted to another point on the plan, the intersection in the beam of light is again marked, and the two points are joined. By moving the adjustable stand until various points on the plan have been brought under the cross-lines the outline of the plan, at the chosen observation level, is mirrored on to the drawing paper. By repeating the process at other levels the perspective can be set up. Conversely, a perspective can be reproduced as a plan. The proportional distance between the movable stand and the mirror, and from the mirror to the paper, determines the reduction or enlargement in the perspective from the original.

Rural Water Supply. There are plenty of houses in Great Britain which derive their water supply from wells but which have a mains electricity supply. On the stand of R. A. Lister and Co. Ltd. (Dursley, Gloucestershire) we saw a simple pump and motor unit which should ensure a constantly filled roof tank for domestic hot

and cold water. It is entirely self-contained, is automatically lubricated and very quiet running. With a float switch fitted it starts and stops automatically. It lifts 250 gal. per hour to a total head of 80 ft., including 25 ft. suction lift. The motor is $\frac{1}{4}$ h.p. and runs at voltages 200/220, 230/240 or 240/250. The price is £27 5s., plus £3 3s. for the float switch and £1 3s. 9d. for the foot valve and strainer.

For those without benefit of electricity the firm produce a similar unit powered by a 1 h.p. 4-stroke air-cooled petrol motor. The pump is the same as in the electric model. The price of the combined engine and pump is £39.

Two-way Ventilation. Some time ago the JOURNAL described the Colt 'Two-way' window fan for shops, offices and domestic use. This is the only fan which extracts vitiated air and blows in fresh air at the same time. Messrs. Colt Ventilation Ltd. (Surrey, Surrey) have now added to this useful piece of machinery a simple electric heater and a filter. The heater clips on and can be removed in summer; it has a fool-proof switch in that one cannot have the heater switched on without the fan running. The filter, which is made of glass fibre, is simply pushed into place.

Tungsten Carbide. Seeing a man sawing through a brick wall with a hand saw or drilling a hole in it with a brace and bit is likely to make the old-time craftsman wince. But today the tipping of tools with tungsten-carbide has made this possible. Yet one may still see on many building jobs an operative using a jumper and hammer in order to make a hole (not

infrequently cone-shaped) to take a plug. The Rawlplug Company Ltd. (Cromwell Road, S.W.7) say that their Durium masonry drills have revolutionised hole boring—and they ought to know. They also market a long series of drills to take extension rods which give 12 in. and 16 in. drilling lengths. Their stand also showed their wide range of plugs and anchors for holding all sorts of things.

Sawing of walls we observed being done on the stand by John M. Perkins and Smith Ltd. (London Road Works, Braunston, nr. Rugby). They sell saws for cutting chases and a special saw for cutting window and door openings in 9 in. walls. They also sell drills and plugs for masonry as well as drills for glass.

We understand that today every well-equipped burglar has a set of tungsten carbide drills in his tool kit. But not every builder seems to have heard of them. They make neater holes than do the jumper and hammer and are far quicker in use.

Non-corroding Cisterns. It is seldom a pleasant or clean task to go up into the normal roof space in a house, and if the cold water cistern is placed there it is usually left there undisturbed and is not inspected until a damp patch appears on the ceiling below. A cistern that will not corrode or give rise to electrolytic action has therefore obvious advantages. Although the Everite asbestos cement cold water storage cistern is not new, its prominent position on the stand of Messrs. Turners Asbestos Cement Company Ltd. called attention to it. It is made in one piece, with rounded corners and—if desired—with a lid. It is resistant to soft and hard water and complies with the Model Bye-laws and the regulations of the Metropolitan Water Board. The cistern tapers very slightly towards the bottom and this, coupled with the absence of rivets or bolts, is an advantage if the water should freeze. Nominal capacities are as follows, the actual capacity up to 4½ in. from the top being given in brackets: 6 gallons (3.8), 10 (6.75), 20 (14.25), 30 (23), 40 (30.5), 50 (42.25), 60 (50), 80 (66.5) and 100 (85). The thickness of the walls in the 6-gallon size is ¾ in., and ½ in. for the other capacities.

Copperad Raystrip. This radiant heat system consists of aluminium sheets prepared for attachment to 1½ in. nominal bore steel hot water pipes. The sheets have corrugations running parallel to the pipe, for the sake of appearance and rigidity. Raystrip can be mounted horizontally, either with or without top insulation, or it may be fixed vertically for perimeter heating, either close to the walls or between bays, in which case it radiates from both sides.

Raystrip is made by Messrs. Copperad Ltd., of Colnbrook, Bucks, the London office being at 12 Baker Street, W.1.

Asbestos Cement Decking. Some recent developments brought out by the Universal Asbestos Manufacturing Company Ltd. (Tolpits, Watford, Herts) include an insulated hollow roof decking. This is made up



Fig. 15. A flush switch outlet in the Avon range by the Edison Swan Electric Co. Ltd.

of two similarly profiled components riveted together and bonded with a special adhesive. A 1 in. thick layer of bitumen-bonded-glass fibre is applied to the inside of the ceiling membrane, giving a U-value of 0.15. The decking is 6 in. thick and the units are in standard lengths of 6 ft. up to 10 ft. with an effective width of 16 in. The units are laid butted together, the shape of the ends giving an overlap.

The universal battened decking of the same firm combines corrugated sheets with wood battens attached at the works to the underside and flat asbestos cement sheets on the top to receive felt weathering. The battens allow several forms of ceiling finish to be nailed to them. Standard lengths are 6 ft. to 10 ft.; effective width as laid, 2 ft. U-value with fibreglass and roofing felt, 0.12. In their metal reinforced decking the corrugated sheets come on the job with a flat sheet attached to the underside, the troughs—at 9 in. centres—being filled with reinforced concrete on the site, rods being delivered loose. Two sections are available; the light having an overall width of 3 ft., and the heavy section 2 ft. 3 in. Standard

lengths are 6 ft. for the light section and 6 ft. to 10 ft. for the heavy.

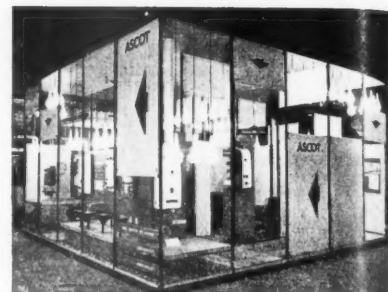
The company supply appropriate fittings for ridging, ventilators, etc., and now use special washers for putting under the heads of fixing bolts; these washers are compressible and so form a weathertight connection at these points.

Electrical Gear. Among a welter of electrical gear we picked on the new Avon range of A.C. switches produced by The Edison Swan Electric Company Ltd. These are neat (Fig. 15) and have dollies of nylon giving exceptional mechanical strength which are sunk beneath the face plate for protection. An all-moulded ceiling switch fitting has a nylon connector in place of the usual short length of chain, giving extra insulation and having a longer life.

Modolite Windows. Messrs. H. C. Janes Ltd. (Barton, Bedfordshire), displayed their Modolite windows made in generously sized sections of timber. The centre-hung type is retained in any position by special hinges which can be tightened if necessary, and are locked by a catch engaging on a wedge-shaped fitting, ensuring tight closure. Vertically pivoted and casement types are available and in each case weathering has been given special attention. Internal glazing makes these windows appropriate to upper floor situations. The various types enable many composite arrangements to be made.

The frames are made to a vertical module of 3 in.; there are five individual opening widths, and glazing can be either internal or external.

The AMCA Cabinet Catch. This catch incorporates a lever projecting from a streamlined bow handle of stainless steel. A light pressure on the lever swings the



The stand of Ascot Gas Water Heaters Ltd. designed by Dennis E. Pugh [4] as the result of a competition

inside catch away from its receiver without noise. When shut the door is as resistant to inside pressure from a full compartment as it would be in the case of an ordinary lock. The catch can be applied to drawers as well as to cabinet doors. Dahl Brothers Ltd. (52 Haymarket, London, S.W.1).



The stand of the Lead Industries Development Council designed by John Pinckheard [4]

Correspondence

To the Editor.

THE I.U.A. CONGRESS

SIR,—I read with interest Gontran Goulden's entertaining article in a recent number of the JOURNAL, describing his experiences at the Congress of the International Union of Architects at The Hague last July. But I feel (and I know that many members of the United Kingdom Committee will agree with me) that Mr. Goulden did not sufficiently emphasise the part which he himself played in producing the exhibition of Housing in the United Kingdom which was sent to the Congress as our contribution to the I.U.A. international exhibition 'Housing 1945-1955.'

The United Kingdom exhibition was, as Mr. Goulden says in his article, 'much admired' and those of your readers who saw the exhibition when it was shown at the Building Centre last May will agree with me that our thanks are due to Mr. Goulden and to the Building Centre for making its production possible.

This is by no means the first instance of co-operation between the R.I.B.A. and the Building Centre on a matter of interest to the profession at large and I am sure that it will not be the last.

Yours etc.,

ROBERT H. MATTHEW [4]
Chairman, United Kingdom
Committee, International
Union of Architects

NEW CHURCHES

SIR,—In view of the considerable amount of church building which is now going on all over the country, your readers may be interested to learn that the following resolution was passed at the Session of the National Assembly of the Church of England held on the 16 November last.

'That the Assembly, regarding with concern the continually rising costs of church building projects, and appreciating the difficulty of making local decisions about the building standards to be adopted, ask the Church Commissioners, in association with the Central Council for the Care of Churches and diocesan representatives, to make an early investigation of the problem

with a view to providing guidance to diocesan and parochial authorities.'

The Central Council for the Care of Churches is planning to hold a public exhibition dealing with this topical problem during the fortnight beginning 6 February 1956 (to coincide with the spring session of the Church Assembly) at the Building Centre, Store Street, London, W.1. This exhibition will be opened by Professor A. E. Richardson [F], President of the Royal Academy, and will consist of plans, drawings, models and photographs of churches and hall-churches erected since 1940. Architects who wish specimens of their work to be considered for inclusion in the exhibition should send photographs or drawings of small size to the Librarian, Central Council for the Care of Churches, Fulham Palace, London, S.W.6, who will communicate with them further should enlarged photographs or drawings or plans on a particular scale be required. The closing date for receiving material for consideration is 10 January 1956.

Yours faithfully,

JOAN M. PETERSEN,
Librarian
Central Council for the Care of Churches



Report of the Architectural Education Joint Committee

Council's Decisions on Outstanding Sections

In the JOURNAL for February 1955 we printed the Report of the Architectural Education Joint Committee on the Training and Qualification for Associate Membership of the R.I.B.A., together with the Council's decisions on some sections. The Council have now completed their consideration of the outstanding sections of the Report, namely, Section 20, Conditions of Recognition of Part-time Courses, and Section 30, R.I.B.A. Examinations in Architectural Design, and have decided as follows:—

1. The Council have given approval in principle to the recognition for exemption from the R.I.B.A. Examinations of part-time courses (to be described in future as composite courses) provided they are set up and administered by Schools of Architecture holding full-time courses recognised for exemption from the R.I.B.A. Intermediate and Final Examinations. The Schools concerned will be expected to collaborate with the R.I.B.A. Allied Societies and architect-employers in their areas in ascertaining the demand for such composite courses, arranging for the release of students to attend School, and keeping the R.I.B.A. informed of the proposals.

The R.I.B.A. Visiting Board, following normal procedure, will inspect and report upon composite courses for which recognition is sought.

2. The Council have rescinded their policy on the distribution of Recognised Schools as envisaged by the Report of the Special Committee on Architectural Education, approved in 1944. This will enable Schools of Architecture (including 'Listed' Schools) to apply for recognition for exemption from the R.I.B.A. examinations for their full-time courses. The R.I.B.A. Visiting Board, following normal procedure, will inspect and report upon such courses for which recognition is sought.

3. The Council have given approval for full-time and part-time students, both in 'Listed' Schools and Schools recognised for exemption from the R.I.B.A. Intermediate Examination, who wish to take the R.I.B.A. Intermediate or Final Examination, to be exempted from the submission of Testimonies of Study to the R.I.B.A. In future such students will submit to the authorities of the Schools concerned, for consideration by External Examiners specially appointed

by the Schools, portfolios of School work covering the same ground as that required by the R.I.B.A. regulations for Intermediate and Final Examinations Testimonies of Study. The Schools will be inspected from time to time by the R.I.B.A. Visiting Board.

4. The Council, having taken the view that a test under examination-room conditions is the only satisfactory way of testing a candidate's capability in design, have decided to continue the existing Design Examinations. They have, however, asked the Board to draw up a scheme to make the test a more comprehensive one by reducing the number of Final Examination Testimonies of Study from four main and three subsidiary subjects to three main and two subsidiary subjects, the last of the three Testimonies of Study being expanded to include a design combined with working drawings, and possibly a report, to be awarded marks by the Testimonies of Study Examiners, the marks being placed to each candidate's credit in assessing the results of his examination in design. The Board have under consideration the implementation of this decision.

Book Reviews

The Thermal Insulation of Buildings. Design data and how to use them. *D.S.I.R.: Building Research Station.* By G. D. Nash [and others]. 9½ in. vii + 139 pp. incl. pls. and other illus. H.M.S.O. 1955. 12s. 6d.

The outlook towards thermal insulation of buildings has been changing in a remarkable way in the last few years. Until the Post-War Building Study series was issued it is probably fair to say that very few architects gave the subject any serious thought and practically none had the ability to make even the simplest calculation of values. Now it is reasonable to assume that the subject is taught to some extent in all the schools of architecture and that no self-respecting architect who is not hopelessly behind the times would design a building without considering what could be done to make it both more economical and more comfortable by including appropriate methods of thermal insulation. Even clients have now got round to the subject and are apt to query their architects on it! It is therefore very appropriate that a good and authoritative reference book should appear at the present time and *Thermal Insulation of Buildings*, coming now from the Building Research Station, fulfils the need in an admirable way.

The book follows a somewhat unusual pattern in that it takes the bold step of providing cost data. It is divided into three distinct parts. First, general principles; second, data sheets on a range of materials; and third, the cost section.

The section on general principles is simple enough for anyone to understand and yet succeeds, in a modest thirty-eight pages, in including explanations of so many of the not quite straightforward things that have bothered architects who have tried conscientiously to apply insulation to buildings. Things such as how to allow for air cavities, how insulation in pitched roofs can be calculated, how to deal with composite structures such as frame and panel walls. In a book which is so good generally it is tempting to set a very high standard of criticism and it may therefore be suggested that if there is a weakness in the first section it is that a little more advice on practical snags could have been a useful addition. For example, the value of insulation in reducing pattern staining is mentioned, but not the point that if minor cracks are allowed to occur through the insulating material, then violent staining will occur along the line of the cracks and look worse than a more diffused staining over a wider area, such as might have occurred without the insulation. Warnings about condensation, especially condensation hidden within a structure, are given,

but although the theory is well explained it is difficult to assess the degree of importance to assign to this matter in normal everyday practice and some guidance, perhaps by examples of actual cases, could have been very useful. Again, although there is a useful note on the calculation of the economies of insulation, the reference to the value of low heat loss in reducing the capital cost of the heating installation is hardly emphasised enough and is not included at all in the worked out example of cost calculation.

Part II is a perfectly straightforward set of thirty-seven data sheets giving information on most of the commonly used insulating materials. These go far beyond the heat insulating properties as they cover weight, moisture movement, fire risk, fungal attack, sizes available and notes on fixing, finishes and other matters. They also include reference to any relevant British Standards. This section of the book is a most valuable office reference.

Part III is especially welcome for its attempt to give cost data. It consists of thirty-one tables showing the application of insulation to various types of roof and wall construction and the costs, including fixing. Inevitably the costs given are out of date before the book is published; in fact they refer to 1953 prices, but they are so arranged and detailed that substitution of up-to-date figures is not a difficult

matter. A study of these tables is interesting in showing how in the majority of cases the insulation values improve as costs rise. As is so often the case, 'you get what you pay for'. One cannot help wondering, however, whether this is always a strictly natural phenomenon or whether in some cases prices are fixed by manufacturers in relation to performance rather than to cost. This section, as well as Part I, is well illustrated with clear line diagrams.

Altogether a book which every office must have and also one which students will find most useful. And reasonable in price as well. C. C. HANDISYDE [4]

Studies in the Functions and Design of Hospitals. The report of an investigation sponsored by the . . . Trust and the University of Bristol. *Nuffield Provincial Hospitals Trust*. Ob. 9½ × 12½ in. xx + 192 pp. incl. illus. + (2) pp. of illus., col'd. Oxford U.P. 1955. £3 3s.

It is refreshing in these days of reports, commissions, investigations, research teams and the like to find that one in particular should have sufficient conviction in its findings to commit them to more than paper, and that two regional hospital authorities in Scotland and Northern Ireland should consider themselves justified in sponsoring projects, a medical and a surgical ward unit respectively, at their own expense and acting as 'guinea-pigs' in the process.

This publication is the culmination of five years' exhaustive study, under the direction of Richard Llewelyn Davies [4], during a period of comparative inactivity in hospital building. It is particularly well timed in that it coincides with the announcement by the Minister of Health of the first two-year programme involving some seventeen million pounds. Some of its contents formed the subject of papers and discussions at the R.I.B.A. Hospitals Conference over a year ago. At that time certain Ministry bulletins were also said to be on their way, and if the current Ministry of Education series can be taken as examples, official guidance on general principles could be timely without in any way resulting in uninspired standardisation.

It is not possible here to review the work in any detail, but in attempting to assess its place in the developing pattern generally, a sketch of the context has been indicated above. One has only to turn to the shelves of the leading reference library on the subject of hospital planning to realise that there is a gap, which is made more conspicuous by the presence of only one comparatively slim volume (reviewed in these columns in October last) compiled by an architect who is in day-to-day contact with the problems involved. Some form of architectural omnibus handbook is needed, bearing in mind that hospital design today must inevitably be a synthesis of a team composed of widely differing 'disciplines' or trained professional outlooks, each member of the team somewhat naturally tending to regard a problem from his own traditional standpoint. As the publisher's

hand-out suggests, this report is a tool to serve those responsible both for existing hospitals and for designing new ones, and if it provides a common ground of approach for architect, administrator, matron, surgeon, doctor, specialist, consultant, nursing or engineering staff it will have served a paramount need.

Certain dangers of abstract research are evident, particularly in the section devoted to out-patients, where 20 pages of rather indigestible tables and one 'traditional' lay-out predominate; the fundamental difference of approach to the out-patient in a polyclinic, as opposed to the acute bed-patient, tends to be overlooked. A visit to one of the more recent examples in this country, St. James', Balham, for instance, and a study of its flexible planning and essentially human approach would have avoided this. Nevertheless, in the field of cost planning, time and motion study has pointed the way to legitimate economies in lay-out; and, provided that the experimental units are accepted as such and not as ready-made solutions (surely the w.c. at the bed-head is a case in point), much time should be saved at design stage in a programme which appears to be a race for time, with allocation of capital money as the stakes.

J. GORDON BERRY [F]

Decorating for the Amateur, by Eric Bird and Kenneth Holmes. (The How to Do it series, 58.) 9½ in. 80 pp. + (16) pp. of illus. The Studio. 15s.

It was once generally believed that the expert should never proclaim his secrets to the world lest he become but one of a crowd. Economic conditions today, however, have driven even stockbrokers to take an interest in the 'Do it yourself' movement. The sad and dangerous fact for architects is that we are too often asked—and expected to know—the answers to a great number of questions which are strictly the province of the practical decorator.

The authors have combined to produce a book which may fill a useful niche on our bookshelves. Written in the indigestible, staccato style generally accepted today as being essential for successful reference books, its clarity is reinforced by illustrations in isometric projection which tell the story with excellent economy.

Fifteen chapters cover a great deal of ground—far more in fact than is suggested by the title. Wisely, the authors have taken trouble to explain simple construction and common defects before attempting to lead the layman into the realm of decoration.

Floors, furnishings, lighting, heating and tiling are all treated adequately, but there are some surprising omissions. Nothing, for instance, is said about insulation in the chapter on heating, nor is there any mention of the combating of draughts and the dangers that are inherent in the usual methods adopted. One surprising recommendation is that of emulsion paints for bathrooms and kitchens.

Sixteen pages of half-tone illustrations showing examples of decorated rooms

would have been improved in their usefulness if a description of the colour schemes involved had been included. Nevertheless, the authors have filled a very definite need by tackling a difficult problem with sympathy and considerable understanding.

ERIC AMBROSE [F]

Monmouthshire Houses. A study of building techniques and smaller house-plans, etc. *National Museum of Wales: Welsh Folk Museum*. Pt. iii. Renaissance houses, c. 1590–1714, by Sir Cyril Fox and Lord Raglan. 10½ in. × 8½ in. 178 pp. incl. illus. + xxxi pls. Cardiff. 1954. £1.

Monmouthshire Houses is the third and final volume recording the study of the smaller houses in this most delectable county. Like the previous volumes, it is not a book for the casual reader, but will well reward those who seek reliable information regarding a localised style and technique in rural building.

The smaller houses of Monmouthshire have never attracted much favourable comment from learned travellers, who have discoursed at length upon the popular attractions of the county. Yet these small houses possess a basic domestic plan originating from pre-Norman times which has stubbornly persisted up to and even through the Renaissance period to a more marked degree than in most counties. It is this localised style, only slightly modified by external influences, that the authors have so well portrayed in the three volumes now completed. Many of the buildings they would have wished to record had already gone when they began their task, but enough remained for them to produce a most worthy companion to the outstanding work on the Welsh house written by Dr. Iorwerth Peate.

Part iii of *Monmouthshire Houses* illustrates the effect of the Renaissance on farmhouse building in the less mountainous portion of the county, and covers broadly the whole of the 17th century. The houses in the very high land in the west follow closely the basic Welsh type, and the authors have done no more than refer to them in general terms. The main aim of the work was to record the layout of the houses and their constructional features, but interesting examples of planned design and decoration have not been ignored, although in general these houses cannot be considered important, if judged—and this in any case would be wrong—solely from an architectural viewpoint.

The authors strongly emphasise the relationship between a very limited measure of outward display and the degree of prosperity enjoyed by the community at the time the house was built or altered. Sir Cyril Fox, in particular, has always searched for an economic factor to explain any comparatively sudden departure from plainness to display or vice versa.

The volume is illustrated by numerous reproductions of line drawings, sketches and photographs, all presumably the work of the authors. The photographs are no doubt adequate for their purpose, but

monotonous, while the drawings are clear and accurate with no artistic pretensions.

An extremely valuable statistical summary of house building and house survival in Monmouthshire concludes the work and clearly shows the great value of recording lesser buildings before the opportunity of doing so passes away for ever. When similar work of recording has been done for all counties, it will be possible to compare more closely the relationship between the work of isolated craftsmen in Monmouthshire and those who worked in similar conditions elsewhere. We shall then be able to judge better how much of their work originated in their own county and thus answer an obvious doubt in the minds of the authors.

May *Monmouthshire Houses* encourage more research on similar lines into the lesser dwellings of Great Britain!

HARMAN A. BOWEN [4]

Dwelling House Construction, by Albert G. H. Dietz. 2nd ed. 9 in. xi + 396 pp. incl. pp. of illus. text illus. New York: Van Nostrand; London: Macmillan. 1954. £2.

Looking at magazines like *ARCHITECTURAL FORUM* is rather an exasperating business for those of us who are interested in building techniques. Exasperating because of the wealth of new materials and techniques 'on sale', when one knows that such a range cannot be available over here with the demand so relatively limited.

It seems curious that we get no information on the more ordinary techniques usually put into school textbooks, and when one finds a book entitled *Dwelling House Construction* one hopes that here at last is a comprehensive book on most of the best American practice on building small buildings. Unfortunately no! Or perhaps the answer is yes, when one wants it to be no, for this book by the Professor of Buildings Engineering and Construction at M.I.T. is very comprehensive but rather dull, with a heavy bias towards timber framing and containing much which we consider out of date here. Is this really, one wonders, contemporary American building?

DENZIL NIELD [4]

Holz im Raum, Boden—Wand—Decke, by A. C. Rüdenauer. 11½ in. 200 pp. incl. pp. of illus. + (4) col'd pls. Munich: Callwey. [1954.] DM 34.—.

Timber interests are currently running an advertising campaign to encourage wider use of wood in construction, and here is a book which should strengthen their arm. It contains concise descriptions of the different types of wood floors, walls, and ceilings, with translations of trade terms at the end for those whose German is inadequate, but the main part consists of some 300 photographs of interiors in wood. A few painted ceilings and bars in the folk-art idiom have crept in, but there are also many examples of good modern design; the traditional applications of wood in flooring, panelling, and beams are shown in new settings without too many imitations of the

old or self-conscious exaggerations of the new. The photographs (some in colour) are of a high quality, and will offer many ideas to interior designers.

M. W.

TV Stations. A guide &c., by Walter J. Duschinsky. (Progressive Architecture library.) 11½ in. 136 pp. text illus. New York: Reinhold; London: Chapman & Hall. [1954.] £4 16s.

This might have been a very useful book. The author has set about his extensive task full of good intentions and obviously with considerable experience behind him, but in the end the task, or something else, has defeated him. There are probably at least two reasons for this, and one is the language difficulty. Enough literature now comes from the U.S.A. to give most of us at least a nodding acquaintance with transatlantic idiom, but when a welter of obscure technicalities is grafted on to it, the results are irksome if not impossible to follow. Americans often have a happy gift for producing just the right verbal coin, but unfortunately there are many other occasions when the metal is base. Some attempt has been made to alleviate the technical jargon with a little humour, but this is of about the standard of television variety shows and hardly that of the New Yorker!

Another reason for the only partial success of the book, as far as architects are concerned, is the lack of anything approaching a detailed consideration of the building problems. The outlines are sketched in, but if one seeks information on such small but vital matters as what is the minimum requirement in mass of a wall to provide the necessary sound insulation between two typical rooms, one looks in vain. The author might say that this kind of question can be answered only by the specialist consultant, but most architects in this country would feel that points of this sort should at least be broadly covered.

Although the book is subtitled 'a guide for architects, engineers and management', the needs of these readers are treated in exactly the reverse order of importance in the text and illustrations. Perhaps this is understandable in a country where commercial interests run television and there is no public authority, but for architects the book is little more than a rather bewildering introduction to the subject.

H. R. HUMPHREYS [4]

Practical Concreting, by A. E. Peatfield. (Teach yourself books series.) 7 in. 256 incl. viii pp. incl. pls. and other illus. English Univs. Press. 1955. 6s.

The author of this short introductory book has obviously tried to cater for the needs of many different types of reader, but it is arguable whether he has succeeded in satisfying any of them. He has certainly made a gallant attempt, and perhaps the chapters on foundations and the elements of coloured, lightweight and prestressed concrete will be useful to the architectural student, although not much else. The Cement and Concrete Association has pro-

vided tables for estimating quantities, and a glossary and a list of relevant British Standards are included in the little volume, which embraces almost the entire world of concrete for professional and amateur in 250 pages.

Quantities and Estimating for Building Technicians, by John F. L. D'Este. Denzil Nield, gen. ed. Vol. i, **Plastering and Paving**. v + 122 pp. incl. pls. Vol. ii, **Brickwork and Drainage**. v + 90 pp. incl. pls. each 7½ in. Spon. 9s. 6d.

The first two of what should be a useful little series on estimating, in which each trade or group of trades is dealt with in a separate volume. There are many diagrams and specimens, but the indexes appear rather brief.

Building Price Handbook, by Reginald D. Wood. 2nd ed. 7½ in. 159 pp. Estates Gazette. '1955-6'. [1955]. 15s.

A clear, trade-by-trade price-handbook, in accordance with the 1955 R.I.B.A. form of contract.

The Village Hall. Design and Construction. National Council of Social Service. (Village hall series.) 8½ in. 24 pp. incl. pls. and other illus. 1955. 3s. 6d.

This booklet, embodying the experience of The National Council of Social Service and its affiliated Rural Community Councils, offers advice on the design, construction and lay-out of village halls of various sizes.

Analysis of Symmetric Cylindrical Shells etc., by John McNamee. Department of Scientific and Industrial Research: Building Research. 9½ in. v + 85 pp. incl. illus. H.M.S.O. 1955. 12s. 6d.

Dr. McNamee has reprinted some lectures at Liverpool University on the stress-analysis of shell roofs. He describes them as 'elementary', which is a relative term; certainly they are well presented, and the large pages give ample room for the diagrams and equations.

Library Resources in the Greater London Area. No. 4, Theatre collections. A Symposium. Miss A. M. C. Kahn, ed. Library Association: Reference and Special Libraries Section. repr. typescript. 9½ in. 1955.

An annotated list, prefaced by articles described as a symposium, of the many London libraries which may be consulted by students of the theatre and especially of theatrical history.

A Bibliography of The Muslim Architecture of Egypt, by K. A. C. Creswell. Institut Français d'Archéologie Orientale du Caire. Art Islamique series, iii. 11 in. 64 pp. Cairo. 1955.

Professor Creswell has now completed this part of his Bibliography of the Architecture, Arts and Crafts of Islam, begun in 1912. Scholars will be grateful to him for his devotion to a task which, but for him, might never have been undertaken.

Notes and Notices

NOTICES

Special General Meeting, Tuesday 10 January 1956 at 6 p.m. A Special General Meeting will be held on Tuesday 10 January 1956 at 6 p.m. to confirm such resolutions as are passed at the Special General Meeting held on 20 December 1955 concerning the proposed revision of the Bye-laws as recommended by the Council and as set out on pp. 28-30 of the November 1955 issue of the JOURNAL.

Third General Meeting, Tuesday 10 January 1956. The Third General Meeting of the Session 1955-56 will be held on Tuesday 10 January 1956 following the Special General Meeting, for the following purposes:

To read the Minutes of the Second General Meeting held on 6 December 1955; formally to admit new members attending for the first time since their election.

To read the Council's Deed of Award of Prizes and Studentships 1956.

Sir E. Owen Williams, K.B.E., B.Sc., M.Inst.C.E., to read a paper on 'The Motorway and its Environment'.

(Light refreshments will be provided before the meeting.)

Symposium on Drawing Office Technique, Tuesday 17 January 1956 at 6 p.m. The Science Committee have arranged a Symposium on Drawing Office Technique to take place on Tuesday 17 January 1956 at 6 p.m. Details are given on page 42.

Examination in Professional Practice and Practical Experience. The concession in respect of the period of practical experience made to those who started their architectural training before 1 November 1949 ended on 1 November 1955 and all candidates are now required to comply with the following regulation:—

'Twelve months' practical experience in an architectural office or department, or in a suitable technical capacity on building work in course of construction must be gained after passing the other subjects in the R.I.B.A. Final or Special Final Examination, or an examination recognised for the Associateship or for registration, before the Associateship or registration can actually be attained. The following exceptions are made:—

"(1) Candidates passing the other subjects of (a) the R.I.B.A. Final or Special Final Examination, or (b) the examinations at the Schools of Architecture recognised for the Associateship and for registration, will be allowed to take the Professional Practice and Practical Experience Examination at the first opportunity after passing the other subjects of those examinations provided that they submit satisfactory evidence of having spent, before passing those examinations, a minimum period of six years in an architectural office or department or in a suitable technical capacity on building work in course of construction.

"(2) Candidates at Recognised Schools of Architecture qualifying for the Associateship or for registration by the successful completion of a part-time or evening course exempting from the R.I.B.A. Intermediate Examination, followed as a minimum by the last two years of a Degree or Diploma Course, will be allowed to take the Professional Practice and Practical Experience Examination at the first opportunity after qualifying."

The Council of the Royal Institute have

decided that with effect from 1 November 1962 the minimum period of practical experience to be gained by candidates for the Associateship R.I.B.A. shall be two years, of which at least one year must be subsequent to the Final or equivalent recognised examination (excepting the examination in Professional Practice and Practical Experience).

The Council of the Royal Institute have also decided that with effect from 1 November 1962 exceptions (1) and (2) referred to above will be abolished, and no exceptions will be made to the regulation, which will apply also to the examinations recognised by the A.R.C.U.K. as qualifying for registration under the United Kingdom Architects Registration Acts 1931-38.

R.I.B.A. Award for Distinction in Town Planning. The R.I.B.A. Award for Distinction in Town Planning is the only award in town and country planning bestowed by the R.I.B.A. It is by conferment only and is limited to Fellows, Associates and Licentiatees of the R.I.B.A. Outstanding work in the design and layout, not of individual buildings, but of groups of buildings will be recognised. The award will be made for actual planning work and while not primarily intended for housing layouts, such layouts of groups of buildings would not be excluded.

Recommendations are submitted to the Council by a Standing Committee set up for the purpose. Personal applications by candidates will not be entertained; the name of a candidate must be submitted by three or more sponsors, themselves members of the R.I.B.A., who will be required to submit details of the candidate's professional qualifications and experience and evidence of the candidate's actual planning work. Nominations may be made twice annually, on 1 March and 1 November, and must be addressed to the Secretary, R.I.B.A., 66 Portland Place, London, W.1.

Members upon whom the award has been conferred will be entitled to use the designation 'R.I.B.A. Award for Distinction in Town Planning' and it is advised that this should be used in full, or the initials 'Dist. T.P.' after the initials 'F.R.I.B.A.', 'A.R.I.B.A.', or 'L.R.I.B.A.', according to the class of membership to which they belong.

Applications for the Fellowship. As announced in the R.I.B.A. JOURNAL for May 1955, p. 280, a new procedure for considering applications for election to the Fellowship will come into force on 1 January 1956. From that date all candidates without exception will be required to submit to the Fellowship Examiners drawings and photographs or examples of work. They may also be required to attend for an interview, which may however be dispensed with at the discretion of the Fellowship Examiners.

Hitherto, Associates who have been principals in private practice for not less than seven successive years, and certain other Associates regarded as being in a position of equivalent responsibility, have been able to proceed to the Fellowship without the submission of drawings or examples of work. This concession terminates on 31 December 1955.

After that date the Fellowship Examiners will meet monthly to consider applications for the Fellowship. Any Associates applying will be required to submit to the Examiners for the approval of the Council working drawings and photographs of one or more of their executed buildings, which may be supplemented by original sketches or measured drawings of actual work. Applicants are requested to indicate on their drawings the date upon which they were prepared. The provisions at present in force for Licentiatees applying for election to the Fellowship are not affected.

British Architects' Conference, Norwich, 30 May-2 June 1956. The British Architects' Conference in 1956 will be held at Norwich from 30 May to 2 June at the invitation of the Norfolk and Norwich Association of Architects, who have appointed a committee to draw up a programme and make the necessary preparations.

The theme of the Conference will be on the subject of architectural economics or value for money. The exact title has not yet been settled.

As hotel accommodation in Norwich is strictly limited, the Committee have prepared a list of hotels in and around Norwich (printed below) which will reserve a large proportion of their accommodation provisionally for members attending the Conference. Members are therefore strongly advised to make their reservations as early as possible and in any case not later than 31 March 1956, after which date the hotels cannot undertake to keep rooms unless definitely booked.

British Architects' Conference, Norwich, 30 May-2 June 1956

LIST OF HOTELS

Name	Address (Norwich, unless otherwise stated)	Total No. of Guests	Bed and Breakfast	Garage
*Royal	Prince of Wales' Road	140	25/6	Nearby
*Maid's Head	Tombland	72	25/6	Yes
*Bell	Orford Hill	84	25/6	Parking
*Castle	Castle Meadow	103	25/6	Parking near
Annesley	Newmarket Road	30	21/-	Parking
Cavell	Tombland	32	21/-	Park near
Lansdowne	Thorpe Road	35	21/-	Parking
*Great Eastern	Prince of Wales' Road	56	21/-	Parking
Innisfallen	32 Unthank Road	40	18/6	Parking
Clarendon	Clarendon Road	30	18/6	
Heathcote	23 Unthank Road	20	18/6	Parking
†Town House	Thorpe—2 miles	36	21/-	Yes
St. Lucia	Thorpe—2 miles	40	18/6	
†Caister Hall Club	Caister—3 miles	18	21/-	Yes
*Swan	Horning—10 miles (on Broads)	12		Yes
†Petersfield	Horning—10 miles (on Broads)	9		Yes
*King's Head	Wroxham—7 miles (on Broads)	10		Yes
Abbey	Wymondham—9 miles	20		Yes

* Licensed.

† Club Licence.

In case of difficulty, members should communicate with Mr. W. G. Knapton, Secretary to the Norwich and District Hotels and Restaurants Association, 116 Thorpe Road, Norwich (Telephone No. Norwich 24461).

The R.I.B.A. Appointments Department. Members and Students of the R.I.B.A. and the Allied Societies are reminded that the services of the Institute's Appointments Department are available to employers requiring assistants and to assistants seeking salaried employment.

Employers are invited to notify the Secretary of vacancies in their offices, giving details of the work to be done, the qualifications required and salaries offered.

Assistants should preferably call at the offices of the Appointments Department, but if this is not practicable they should obtain from the Secretary an application form, which when completed and returned to the Institute will enable the Department either to send the applicants particulars of vacancies suitable to their qualifications and requirements or submit their names for vacant posts.

Members and Students seeking official appointments should note that normally these are fully advertised in the weekly professional Press, and that therefore the Appointments Department do not as a rule notify them to those on the register.

The Institute will also be glad to advise on most matters concerning architectural employment, including overseas appointments.

Members and Professional Affixes. The Council's attention has been called more than once to the practice among some members of adding a string of letters of doubtful value to the affix indicating membership of the Royal Institute on their letter paper.

This is a matter in which the Council obviously cannot dictate to members, and must trust to their good sense. It should be obvious, however, that the affix of a chartered body of high standing is weakened in effect by the addition to it of a string of other mysterious designations some of which probably indicate no more than the payment of an annual subscription.

COMPETITIONS

Manhattan Redevelopment: International Competition. The publishers of *U.S.A. Tomorrow* invite architects, city planners, engineers and all others identified with these or allied professions to submit schemes for the redevelopment of the mid-town area of Manhattan. *There is no undertaking that any award-winning entry will be used.*

Assessors: Mr. Charles Abrams, Professor Percival Goodman, Mr. Jose Luis Sert, Mr. William W. Wurster, Mr. Maurice E. H. Rotal.

Premiums: \$5,000, \$2,500, \$1,500, \$1,000.

Last day for submitting schemes: 1 June 1956.

Conditions may be obtained on application to: 'U.S.A. Tomorrow', Manhattan Redevelopment Competition, 210 Fifth Avenue, New York 10, N.Y., U.S.A.

Dwellings for Old People, East Horsley, Surrey. The Architects' Benevolent Society Homes Trust invite architects in Great Britain, Northern Ireland or the Republic of Ireland to submit in competition designs for 20 new dwellings for Old People and Wardens's accommodation at East Horsley, Surrey.

Assessors: Mr. H. S. Goodhart-Rendel, C.B.E. [F], Mr. Arthur W. Kenyon, C.B.E., M.T.P.I. [F], Mr. G. Grenfell Baines, A.M.T.P.I. [4].

Premiums: £100, £75.

Last day for submitting designs: 6 April 1956. No questions will be answered.

Conditions may be obtained on application

to: The Secretary, Architects' Benevolent Society, 66 Portland Place, London, W.1.
Deposit: £1 1s. 0d.

City and Royal Burgh of Perth: Competition for the Lay-out of Buildings, etc. The Town Council of Perth invite architects practising in Scotland to submit designs in competition for the lay-out of buildings, roads, parking-spaces, etc., and for shops, offices and houses in a central area of the town.

Assessor: Mr. Robert J. Naismith, M.T.P.I., F.R.I.A.S. [4].

Premiums: £450, £375, £250.

Last day for submitting designs: 30 April 1956.

Conditions may be obtained on application to the Town Clerk, City Chambers, Perth.
Deposit: £2.

International Competition for a Monument in honour of Generalissimo Dr. Rafael Leonidas Trujillo Molina. Notice has been received from the Secretary-General of the International Union of Architects of an architectural competition being promoted in the Republic of Dominica for the design of a monument commemorating Dr. Rafael Leonidas Trujillo Molina.

The conditions for this competition are at present not such as to conform to the Regulations for International Competitions in Architecture and Town Planning approved by the International Union, and members and Students R.I.B.A. are accordingly warned not to take part in this competition.

If, as a result of further negotiation, the conditions are amended to satisfy the requirements of the International Union, a further notice will be published.

COMPETITION RESULT

A House for the Professional Man: Messrs. Tretol Ltd.

1. Messrs. R. Towing Hill, A.A.Dipl. [4] and Partners in association with Frederick Mark (Student).

2. Mr. F. A. Sargent, Dipl.Arch.(Northern Polytechnic) [4].

3. Mr. P. J. Lord-Smith [4].

BOARD OF ARCHITECTURAL EDUCATION

Examination in Professional Practice and Practical Experience. The Examination in Professional Practice and Practical Experience was held in London and Edinburgh on 14 and 15 November 1955.

Of the 291 candidates examined, 263 passed and 28 were relegated. The successful candidates are as follows:—

Arnold: G. B.
Arscott: P. H.
Ashdown: D. G.
Atkins: G. C.
Bader: Lawrence
Baker: Jon
Baldwin: G. B.
Barclay: S. L.
Bartrop: P. C. D.
Barnes: K. W.
Barnett: G. K.
Beaman: Joseph
Belchambers: E. E.
Belcher: C. A. I.
Bennett: A. S.

Benton: P. A. S.
Bermingham: H. P. M.
Biddiscombe: R. C.
Bird: B. J.
Bland: A. J.
Blewett: Peter
Booth: F. E.
Bowley: J. M.
Boyt: D. F.
Bradbeer: F. H.
Branch: D. C.
Brigham: P. C.
Bright: I. B.
Broadway: R. P. P.

Brocki: Leon
Bruxby: W. J.
Burrell: P. G.
Burton: Michael
Butler: P. V.
Calnan: P. T.
Cameron: H. N.
Campbell: K. P.
Cantacuzino: S. G.
Carpenter: D. C.
Carter: C. M.
Carter: D. W. G.
Chamberlain: A. J.
Chambers: R. T. J.
Charlton: D. H.
Cheney: D. H.
Chojnicki: Leszek
Chwalibogowski: A.
Clarke: P. A.
Cobb: G. B.
Coombs: K. A.
Corlett: F. B.
Couchman: G. N.
Croft: P. R.
Cross: P. M.
Cryan: J. O.
Curtin: P. C.
Dailey: W. R. G.
Dalby: M. S.
Dalton: D. J.
Dalton-Morris: P. A. J.
Day: H. F.
Dean: D. C.
Delaney: W. J.
Dick: J. M.
Dobbing: Peter
Dunnings: S. A.
Eade: Richard
Edmonds: G. W.
Ellard: T. L.
Elliott: M. R.
Evans: D. R.
Evans: W. F.
Fleck: H. F.
Fowler: C. M.
French: T. H.
Fry: V. G.
Fulker: P. H. W.
Gainsborough: John
Garner: Stephen
Geldard: R. S.
German: R. K.
Gilby: P. S.
Gilham: K. E.
Glennie: D. D.
Gobby: R. E. E.
Good: A. R.
Goulty: J. F.
Green: R. J.
Greene: N. J.
Gregson: Ralph
Grogan: E. M.
Guy: R. L.
Hanson: Jack
Hartridge: C. A.
Hawker: D. W.
Hawkins: Donald
Haynes: R. I. E.
Heath: D. A.
Heyworth: A. E.
(Miss)
Hill: S. J.
Homer: W. F.
Hopkins: R. J. A.
Horne: C. A. W.
Horne: J. S.
Horry: K. T.
Howells: C. P.
Howells: Jadwiga
(Mrs.)
Hulse: Erroll
Ingleby: A. W.
Jameson: Gordon

Jeffries: J. B.
Johns: A. W.
Johnson: H. N.
Jones: A. E. E.
Jones: E. D.
Jones: John
Kemball: F. J.
Kemp: Edward
Kettle: A. B.
Kilpatrick: P. J.
Kimbell: J. B.
Kimber: John
King: D. G.
Kingsnorth: B. W.
Kudianavala: P. H. C.
Lancaster: M. L.
Lea: C. M. H.
Leonard: H. H. A.
Levy: M. K.
Frome-Lewis: H. L.
Liddell: I. T.
Long: M. R. L.
Lund: Kenneth
McCaffrey: R. P.
McClure: W. M.
McCrae: C. H. R.
Mark: K. W.
Marlow: F. M.
Marsh: H. G.
Marsh: Margaret
(Mrs.)
Marshall: D. A.
Matthews: Anthony
Matthews: R. F.
Maude: J. W.
Meggs: R. C. T.
Mercer: A. J.
Mercer: William
Miles: G. F.
Milner: R. N.
Mountford: J. C.
Neve: J. C. C.
Newbold: C. J.
Newman: William
Newrick: F. J.
Newton-Dawson: W. D.
Northcott: W. R. J.
Nottidge: H. A.
Onslow: John
Paterson: D. J.
Peachment: S. W.
Pearson: K. D.
Penning: D. A.
Perella: A.
Pethybridge: E. G.
Pettersen: F. E.
Pollard: H. A.
Pradhan: S. G.
Prigrove: R. B.
Prynn: B. L.
Quick: R. G.
Radinger: A. P.
Randfield: B. W.
Redmayne: Stephen
Reed: H. H.
Reed: W. J.
Richardson: M. B. N.
Rickard: S. W.
Roberts: R. E.
Roberts: T. R. W.
Robertshaw: J. R.
Robinson: L. J.
Roche: F. L.
Rossi: A. P.
Rostron: R. M.
Russell: D. O.
Rutledge: M. E.
Salisbury: Frank
Scott: W. E.
Seth: Donald
Severs: A. P.

Shanagher: D. J.
 Sharman: John A.
 Shaw: F. T.
 Sheehan-Dare:
 J. G. A.
 Sherry: K. P.
 Shorney: C. P. L.
 (Miss)
 Simmonds: H. C.
 Skewes: I. R.
 Slater: Brian
 Smith: David L.
 Smith: John L.
 Smith: Kenneth S.
 Smith: Michael
 Southam: R. F.
 Southin: C. J.
 Southworth: J. W.
 Stains: M. G. (Miss)
 Staley: J. G. (Miss)
 Stanley: R. L.
 Starzewski: Wojciech
 Steers: J. M.
 Stell: C. F.
 Stepan: O. M.
 Stephen: J. D.
 Stephenson: Derek
 Stevenson: T. W.
 Stockli: J. S.
 Strutt: A. W.
 Stubbs: J. B.
 Sturges: H. W.
 Symonds: A. R.
 Szarowicz: M. J. K.
 Taylor: M. J. W.
 Taylor: M. R.
 Taylor: P. R.
 Thackeray: M. Y.

Thaxton: B. H. S.
 Thompson: R. P.
 Thorington: W. P.
 Trenowden: I. F.
 Tulley: R. G.
 Turner: G. A.
 Twells-Grosse: J. D.
 Twigg: M. W.
 Vaidya: A. M.
 Vekaria: N. J.
 Waite: D. K.
 Wakefield: P.
 Waking: W. G.
 Walker: John
 Walker: Peter J.
 Walker: T. C.
 Walter: M. V.
 Walters: F. R.
 Watson: P. J.
 Watson: R. L.
 Watt: B. E.
 Weaver: K. B.
 Wennan: G. A.
 West: A. S.
 Whallat: A. J.
 Whitcomb: H. F.
 Whitehouse: J. D.
 Wiernicki: Janusz
 Williams: Sheila F.
 (Mrs.)
 Willis: W. N. A.
 Wilson: J. A.
 Wiltshire: K. F.
 Winder: W. J.
 Wright: A. S.
 Wyatt: A. J.
 Young: R. A.

LL.M.; Nancy, Viscountess Astor; the Chairman of the Devon and Cornwall Branch of the R.I.C.S., Mr. W. H. Rumbelow, F.R.I.C.S.; the President of the Plymouth and District Association of Building Trades Employers, Mr. R. J. Powell-Thomas; and the Chairman of the Plymouth Chamber of Commerce, Mr. J. Stanbury Yeo.

The Deputy Lord Mayor proposed the toast of 'The R.I.B.A.' and hoped its future would be worthy of its past. Mr. Aslin, replying, said some architects thought that if there were complete registration in the profession all would be well, but he did not agree. He cited Switzerland, Denmark and Sweden where there was no protection but a high standard of architecture. He thought quality a more essential factor than legal protection and hoped the profession would agree with him and work in that spirit.

Sir Clifford Tozer proposed the toast of 'The Devon and Cornwall Society' and said he was pleased to see local architects working on the rebuilding of Plymouth. Mr. Walls, replying, said he was always glad to hear people criticising new buildings but would like the public to be even more critical of bad design and dreary colours so that shoddy buildings and poorly designed street furniture could not be tolerated. The toast of 'The Guests' was proposed by Mr. C. F. J. Thurley [F], Chairman of the Exeter Branch of the Society, and replied to by the Lord Bishop of Plymouth.

Liverpool Architectural Society. Annual Dinner and Dance. The annual dinner and dance of the Liverpool Architectural Society took place at the Adelphi Hotel, Liverpool, on Wednesday 23 November. Mr. W. Glen Dobie, T.D. [F], President of the Society, was in the Chair, and among the guests were the President R.I.B.A., Mr. C. H. Aslin, C.B.E., and Mrs. Aslin; the Lord Mayor of Liverpool, Alderman R. R. Bailey and Mrs. Bailey; Miss Rose Heilbron, Q.C.; the Chairman of the Lancashire, Cheshire and I.O.M. Branch of the R.I.C.S.; Lieut.-Col. Douglas Hall [F], President of the North Wales Architectural Society and Mr. R. M. McNaught [F], Vice-President of the Manchester Society of Architects.

Miss Rose Heilbron proposed the toast of 'The R.I.B.A. and Allied Societies' and Mr. Aslin replied. 'The Health of the Guests' was proposed by Mr. Glen Dobie and replied to by the Lord Mayor.

Nottingham, Derby and Lincoln Society of Architects. Annual Dinner. The annual dinner of the Nottingham, Derby and Lincoln Society of Architects was held at the Welbeck Hotel, Nottingham, on Friday 4 November. Mr. W. Caparne Baldry [L], President of the Society, was in the chair, and among the guests were Mr. C. H. Aslin, C.B.E., President R.I.B.A.; the Lord Mayor of Nottingham, Councillor L. Mitson, J.P.; the Immediate Past President of the Institute of Chartered Accountants, Mr. D. V. House, F.C.A.; Mr. E. E. Ecclestone, President of the Nottinghamshire Law Society; and Mr. C. D. Spragg, C.B.E., Secretary R.I.B.A.

Mr. Caparne Baldry proposed the toast of 'The Cities of Nottingham, Derby and Lincoln' and the Lord Mayor of Nottingham replied. He referred to the necessity for closer co-operation between architects and builders. Mr. House proposed the toast of 'The R.I.B.A. and Allied Societies' and said that the professional man was of vital importance to the country, and it was to be hoped the Chancellor of the Exchequer would do something about the taxation which constituted a real danger to him. Mr. Aslin, replying, said he was sure there should be complete co-operation between builder, quantity surveyor and architect at the

beginning of a job. Mr. Aslin then presented Mr. Caparne Baldry with a gold watch in appreciation of his services as Honorary Secretary to the Society for over 25 years.

Mr. Ashburner [F], Chairman of the Derby Branch of the Society, proposed the toast of 'The Guests' and Mr. Ecclestone replied.

GENERAL NOTES

Bernard Webb Studentship 1955. The Bernard Webb Studentship for the historical and critical study of architecture, which is open to members of the Architectural Association and tenable under the auspices of the British School at Rome, has been awarded to Mr. Timothy G. Bidwell [A], who will study building materials used in medieval Italian architecture.

Durham University School of Architecture. Reunion Dinner. The School of Architecture, King's College, University of Durham, is to hold a reunion dinner on Saturday 28 January 1956 in Newcastle upon Tyne, when Mr. Basil Spence, O.B.E., A.R.A., A.R.S.A. [F], will be the guest of honour. All old students and members of staff will be welcome. Tickets, price 18s. 6d. (excluding wines), are available on application to the School of Architecture.

R.I.B.A. Golfing Society. The Annual General Meeting of the R.I.B.A. Golfing Society was held at St. George's Hill on 30 September. Mr. G. Felix Wilson [L], who has been the Society's Treasurer for many years, was unanimously elected Captain for 1956. Sir Giles Gilbert Scott, O.M., R.A., Past President R.I.B.A., remains as the Society's President.

The Selby Cup was played for at the autumn meeting held at St. George's Hill and was won by Mr. W. R. F. Fisher [F] with a score of 83 less 10, net 73. Eric Firmin [F] and A. D. McGill [A] tied for second place, but the prize was awarded to the former on the best second nine holes. The afternoon four-ball competition was won by Eric Firmin and Felix Wilson four-up after a tie with W. R. F. Fisher and A. D. McGill, the former being awarded the prize on the last nine holes.

The annual dinner will be held at the Milestone Hotel, Kensington, on 20 January 1956. Members wishing to attend should apply in good time to the Secretary of the Society, S. H. Statham [A], Messrs. Sydney Clough, Son & Partners, Devonshire Close, 39 Devonshire Street, London, W.1.

R.I.B.A. Cricket Club. The annual dinner of the R.I.B.A. Cricket Club was held at the Architectural Association on Friday 11 November. A large number of members and guests were present. The toast of the Club was proposed by Mr. A. R. F. Anderson [F] and replied to by Mr. P. W. Adams [F], President. Mr. John Kemp [A] proposed the health of the guests and Mr. Roy Hill replied. The other guests included Mr. Martin Briggs [F], Mr. Eric Bird [A], Mr. F. R. Yerbury [Hon. A], Mr. B. J. Garrat, Mr. Cecil Davis and Mr. Frank Nelson.

The Annual General Meeting preceded the dinner. The following officers were elected for the 1956 season: Club Captain, C. A. R. Norton [A]; Vice Captain and Hon. Secretary, D. L. Robinson [A]; Treasurer, J. G. Batty [A]; Assistant Secretary, G. Fyson [Student]; Ordinary members of the Committee, R. R. Fairbairn [A] and R. Case [Student].

The meeting unanimously passed a vote of thanks to the retiring members, Mr. B. S. Smythe [A] and Mr. D. S. Taylor [F] for their services to the Club since 1946.

ALLIED SOCIETIES

Changes of Officers and Addresses

Essex, Cambridge and Hertfordshire Society of Architects, Cambridge Chapter. The Chairman, Mr. W. Lambert Lee, A.R.I.C.S. [A], has changed his address to 135 The Drive, Bexley, Kent.

Norfolk and Norwich Association of Architects. Mr. W. J. Taylor, M.T.P.I. [L], has been appointed as part-time Secretary of the Association, but all communications should continue to be addressed to Mr. C. J. Tomkins [F], Hon. Secretary of the Association, at City Hall, Norwich.

Nottingham, Derby and Lincoln Society of Architects, North Lincolnshire Branch. Mr. J. Main has resigned the Hon. Secretaryship of the Branch and future communications for the Hon. Secretary should be addressed to Mr. H. T. Bower, 1 Butler Place, Cleethorpes, Lincs.

Transvaal Provincial Institute of Architects. The President is now Mr. M. L. Bryer [A], 703 Jubilee House, Simmonds Street, Johannesburg, South Africa.

Devon and Cornwall Society of Architects: Dinner and Dance. The dinner and dance of the Devon and Cornwall Society of Architects was held this year at the Duke of Cornwall Hotel, Plymouth, on Friday 11 November. Mr. H. F. Walls [A], President, in the chair. It was attended by some 160 members and guests, among whom were: Mr. C. H. Aslin, C.B.E., President R.I.B.A., and Mrs. Aslin; the Deputy Lord Mayor of Plymouth, Councillor P. D. Pascho; the Lord Bishop Suffragan of Plymouth, the Rt. Rev. Norman Clarke; the Vice-Chairman of the City of Plymouth Reconstruction Committee, Alderman Sir Clifford Tozer; the Town Clerk, Mr. S. Lloyd Jones,

Obituaries

John A. Ogg Allan [4] died on 25 May, aged 85.

Mr. Allan was Godwin Bursar 1909 and Institute Medallist (Essays) 1910. He was articled to Mr. Duncan McMillan of Aberdeen and acquired in addition to his architectural training an extensive knowledge of landscape gardening and furnishing.

From 1895 to 1905 Mr. Allan was Master of Works and Architect to the Aberdeen School Board, and in this capacity and later in private practice he was responsible for a number of new schools, mainly in Aberdeen, and for Aberdeen Training College. Among Mr. Allan's recent school buildings were the new junior secondary schools at Torry and Hilton.

A contributor says: 'Mr. Allan held a distinguished place among architects in Scotland and was regarded in the north, throughout the first half of the present century, as the leading authority in the field of educational building and architecture.'

Dendy Watney [L] died on 29 September, at the age of 90. A member who knew Mr. Watney will give the following account of his career:

'Dendy Watney was taken into partnership in 1891 by his father, Daniel Watney, who was surveyor to the Mercers' Company, and his elder brother, Walter Watney. From the start, while continuing to gain as much experience as possible as a surveyor and valuer, he took every opportunity of acquiring architectural knowledge also. He succeeded his father as surveyor to the Mercers' Company, the Joint Grand Gresham Committee, St. Paul's School, St. Paul's Girls' School, etc., in 1900, and in 1912 was elected a Licentiate R.I.B.A.

'His double qualification as a surveyor and architect, coupled with the confidence which his obvious integrity inspired in all who came in contact with him, led to his being chosen on many occasions to give evidence in light and air cases. His was also for many years one of the half-dozen or so names which came to mind when a Third Surveyor had to be appointed. He carried out an appreciable amount of architectural work, including domestic work in Sussex and alterations and additions to St. Paul's School, St. Paul's Girls' School, etc.

'The Joint Grand Gresham Committee is a body consisting of equal numbers of members of the City Corporation and Members of the Mercers' Company. When the Committee decided to rebuild Gresham College, both Dendy Watney and the late Sidney Perks, who was at that time surveyor to the City Corporation, were asked to produce designs. The Committee, on the question of which design should be chosen, gave judgment truly worthy of Solomon. They decreed that Mr. Watney's design (with elevational treatment) for the basement and ground floors be adopted and that Mr. Perks' design for the upper part of the building be superimposed on this. The resultant building was, somewhat surprisingly, singularly successful.'

Mr. Watney was a member of the Building Industries Consultative Board and of the National Housing Policy Joint Committee.

Victor George Santo [Retd. A] died on 7 July, aged 73.

Mr. Santo was articled to Messrs. G. A. Chatwin and Son of Birmingham and practised in Shrewsbury from 1908 to 1948. Among his works is Cophorne Hospital, Shrewsbury, and he also built private houses and carried out alterations to shop premises. He was architect

and surveyor to Monkmoor Hospital, Shrewsbury.

He served in the First World War from 1914 to 1918 as a Lieut. in the 2nd Field Company, Royal Engineers, on the Somme and elsewhere in France.

His practice is carried on by Mr. A. E. Santo at 159B Abbey Foregate, Shrewsbury.

Julius Lonstein [L] died on 9 November 1954, aged 59.

Mr. Lonstein studied at Witwatersrand University and served his articles with Mr. Arthur James Marshall of Johannesburg. He began practice in 1928 and built Sea Point synagogue in addition to flats, cinemas, private houses and a small township near Hermanus Cape.

Adrien Jouvin Sharp. Correction. We regret that in the obituary notice of Mr. Sharp published in the November JOURNAL we stated that Mr. Sharp designed the Commodore cinema and the Trafalgar Institute for Soldiers and Sailors at Brighton. Both buildings are of course in Portsmouth.

Membership Lists

ELECTION: 6 DECEMBER 1955

The following candidates for membership were elected on 6 December 1955.

AS HON. CORRESPONDING MEMBERS (2)

Ditchy: Clair William, Royal Oak, Michigan, U.S.A.
Purves: Edmund Randolph, Washington, D.C., U.S.A.

AS FELLOWS (41)

Alexander: Richard Rennie, Dip.Arch.(Abdn). M.T.P.I. [4 1926], Lincoln.
Bennett: Philip Hugh Penberthy, M.A.(Cantab.) [4 1948].
Bolton: Thomas Porteous, B.Arch., Dip.C.D. (L'pool), A.M.T.P.I. [4 1936], Wendover.
Campbell: Alexander Buchanan, D.A.(Glas.) [4 1937], Glasgow.
Clarke: Albert Harry, A.M.T.P.I. [4 1940], Bristol.
Collis: Russell Edwin [4 1942], Beccles.
Crallan: Hugh Parnell, M.A.(Oxon.), A.A. Dipl. [4 1935], Bath.
Cubitt: James William Archibald, M.B.E., B.A.(Oxon.) [4 1940].
Donati: Edward [4 1937], Minehead.
Eaton: Thomas Albert [4 1942].
Findlater: George Robertson [4 1947], Sunderland.
Garrett: Rodney Colston [4 1947], Brighton.
Herz: Rudolf, Dr.Ing.(Berlin) [4 1952].
Howarth: Thomas, Ph.D.(Glasgow) [4 1940], Manchester.
Hubbard: Robert Pearce Steel, B.Arch.(L'pool) [4 1934].
Jagues: Richard, J.P. [4 1910], Nelson.
Johnson: Edward Austen, Dipl.Arch.(Leeds) [4 1945], Huddersfield.
Knapton: Alan Derek, A.M.T.P.I. [4 1946].
Lowe: Cecil William [4 1940].
Macdonald: Hugh Sinclair, D.A.(Edin.) [4 1930], Thurso.
McLauchlan: Stewart Farrington, Dipl.Arch. (L'pool) [4 1946], Liverpool.
Neale: Peter Walter James, M.C. [4 1947], Birmingham.
Noble: John Baillie [4 1936], Norwich.
Plant: Walter Geoffrey, Dipl.Arch.(L'pool) [4 1929].

Priestman: Harold Dent [4 1936], Hull.
Pym: John, M.A.(Cantab.), A.A.Dipl., A.M.T.P.I. [4 1934].
Rider: Norman Terence [4 1939], Birmingham.
Robb: George Clark, A.M.T.P.I. [4 1940], Inverness.
Royce: Norman Alexander [4 1940].
Sutcliffe: Tom Allison [4 1944].
Tetlow: John Dawe, B.Arch.(L'pool), Dip.T.P. (The Polytechnic), M.T.P.I. [4 1938], Lichfield.
Townsend: Douglas Charles [4 1936], Accrington.
Watson: Kenneth James Victor [4 1947].
Whiting: Basil Thorp [4 1938], Birmingham.
Williams: Richard Allport, M.B.E., B.Arch. (L'pool) [4 1931], Preston.
Wingate: Wilfrid Hurford [4 1930], Cambridge.
Young: John Samuel Auckland, B.A.(Arch.) (Manchester) [4 1941], Manchester.

and the following Licentiates who passed the qualifying examination:

Bruce: Robert Malcolm, Doncaster.
Strahan: Francis Charles.
Wilkinson: Arthur.

and the following Licentiate qualified under the provisions of Section IV, Clause 4 (c) (ii) of the Supplemental Charter of 1925:

Robertson: Robert Malcolm, Liverpool.

AS ASSOCIATES (53)

Anderson: John, D.A.(Edin.), Ballymena.
Annable: Brian, Dip.Arch.(Leics.), Norwich.
Arnell: Kenneth, D.A.(Glas.), Glasgow.
Blackmore: David Anthony, Dip.Arch. (Sheffield), Stoke-on-Trent.
Brooks: Albert John, Dip.Arch.(Leics.), Leicester.
Cameron: John James Amphlet.
Child: Edmund Henry George, East Molesey.
Clarke: Kenneth John, Dip.Arch.(Leics.), Peterborough.
Cook: Ian Gordon, D.A.(Edin.), Nayland.
Cooper: John Leslie, D.A.(Edin.), Carlisle.
Crook: Norman Clifton, Prestwich.
Fairhurst: Ian Garland, M.A.(Cantab.), Dip. Arch. (Manchester), Manchester.
Forbes: Andrew Edmond, Dip.Arch.(Abdn.), Manchester.
Foster: Gordon Horace, Dip.Arch.(Birm.), Walsall.
Frost: Arnold, Dip.Arch.(Manchester), Manchester.
Goodall: Francis Richard Cruice, B.A.(Cantab.).
Henry: Kenneth Frank, Dip.Arch.(Leics.), Swindon.
Jones: Gwyn Achille, Dip.Arch.(Leics.), Leicester.
Jordan: Leslie, Derby.
Lancaster: Frank Hargreaves, York.
McNab: Archibald Campbell, D.A.(Edin.), Edinburgh.
Merrick: Basil, Dip.Arch.(Birm.), Manchester.
Mitchell: Michael Marr, Dip.Arch.(Abdn.), Aberdeen.
Morris: James Shepherd, D.A.(Edin.), Edinburgh.
Mutton: Ronald William, Dip.Arch. (The Polytechnic), Beckenham.
Nairn: Douglas Gordon, D.A.(Edin.), Edinburgh.
Norris: Ronald Derek, Dip.Arch.(Leics.), Cirencester.
O'Brien: Patrick, B.Arch. (N.U.I., Dublin), Stillorgan.
Owen: John Leslie, Newcastle under Lyme.
Patel: Suryakant, Dip.Arch.(Leics.).
Prizeman: John Brewster, A.A.Dipl., Reading.
Reeby: John Francis, A.A.Dipl., Salisbury.
Ridge: Richard Martin, B.Arch.(Dunelm), Hebburn.
Ruffell: Alexander, D.A.(Glas.), Balerno.

Russell: Arthur John, B.Arch.(L'pool), Hincley.
Sanguinetti: Mario Leopoldo, Dip.Arch.(Leics.).
Sierakowski: Kazimierz, Bromley, Kent.
Skellton: (Miss) Margaret, Haywards Heath.
Sketchley: Norman George, Dip.Arch.(Leics.), Leicester.
Smith: Alistair MacLachlan, D.A.(Edin.), Inverness.
Smith: Anthony Vernon, Dip.Arch.(Sheffield), Sheffield.
Snellgrove: John Albert.
Steedman: Robert Russell, D.A.(Edin.), Sevenoaks.
Steel: Andrew Forrest, D.A.(Edin.), Ayr.
Stockdale: Michael Charles, Derby.
Storey: Kenneth, Dip.Arch.(Sheffield), Doncaster.
Tate: John Ramon, Dip.Arch.(Leics.), Leicester.
Thompson: Laurance Geoffrey Duffield, D.A.(Edin.), Larne.
Walker: Frederick Harold Harper, Salisbury.
Ward: Leonard, Leigh-on-Sea.
Weedon: (Miss) Ann Elizabeth, D.A.(Edin.), Tutbury.
Williams: James Charles, D.A.(Edin.), Dover.
Wilson: John Oxley, Leeds.

ELECTION: 10 JANUARY 1956

An election of candidates for membership will take place on 10 January 1956. The names and addresses of the candidates, with the names of their proposers, are herewith published for the information of members. Notice of any objection or any other communication respecting them must be sent to the Secretary, R.I.B.A., not later than Saturday 31 December 1955.

The names following the applicant's address are those of his proposers.

AS HON. FELLOW (1)

Eden: The Right Hon. Sir Anthony, K.G., M.C., M.P., 10 Downing Street, S.W.1. Proposed by the Council.

AS HON. ASSOCIATES (2)

Page: Sir Frederick Handley, C.B.E., D.L., 18 Grosvenor Square, W.1. Proposed by the Council.

Wicks: Pembroke, C.B.E., Mole Bridge House, Esher Road, Walton-on-Thames, Surrey. Proposed by the Council.

AS FELLOWS (59)

The names following the applicant's address are those of his proposers.

Applegarth: Arnold [A 1938], Carlol House, Market Street, Newcastle upon Tyne; 103 Queens Road, Whitley Bay, Northumberland.
 D. L. Couves, G. H. Gray, R. N. Mackellar.

Aslan: Naim Jacob, Dipl.Arch.(L'pool), Dip.T.P.(Lond.), A.M.T.P.I. [A 1946], 90 Lower Thames Street, E.C.3; 76 Queens Gate, S.W.7. Prof. L. B. Budden, Prof. Sir Patrick Abercrombie, J. H. Forshaw.

Barlow: Edward Ernest, Dipl.Arch.(Northern Polytechnic) [A 1947], 2 Verulam Buildings, Grays Inn, W.C.1; 2 Whittington Court, Aylmer Road, N.2. T. E. Scott, Hubert Lidbetter, H. M. Lidbetter.

Boardman: Humphrey Colman, M.A.(Cantab.) [A 1933], Messrs. Edw. Boardman & Son, Queen Street, Norwich; Byways, Eaton Chase, Unthank Road, Norwich. F. H. Swindells, E. W. B. Scott, L. G. Hannaford.

Buckler: Derek [A 1947], 23 Railway Street, Chatham; 40 Wouldham Road, Rochester.

R. M. V. Messenger and applying for nomination by the Council under Bye-law 3(d).

Chatwin: Anthony Bruce [A 1934], York House, 38 Great Charles Street, Birmingham 3; 19 Green Meadow Hill, Birmingham 29. P. B. Chatwin, C. H. Elkins, H. W. Hobbiss.

Clink: Stuart [A 1946], 119 Cadzow Street, Hamilton; 15 Parkside Road, Motherwell. L. W. Hutson, A. G. Henderson, G. F. Shanks.

Collister: Ernest Roy, A.A.Dipl. [A 1939], Springfield Place, Springfield Green, Chelmsford, Essex. Harold Conolly, Prof. R. Gardner-Medwin, Prof. H. M. Wright.

Corsar: Peter McGeech [A 1947], Westminster Bank Chambers, 103 Commercial Road, Portsmouth; 'Oakmont', 237 London Road, Waterloo, Hants. A. C. Townsend, A. E. Geens, J. B. Brandt.

Cox: Geoffrey [A 1938], Cecil E. M. Fillmore, 20 Waterloo Street, Birmingham 2; 66 Oxford Road, Moseley, Birmingham 13. C. E. M. Fillmore, B. C. S. Underhill, H. M. Lawrence.

Creed: Leslie George, A.M.T.P.I. [A 1940], 12 Bolton Street, W.1; 44 Cranley Gardens, S.W.7. Prof. Sir William Holford, Prof. R. Gardner-Medwin, Raglan Squire.

Crook: Alec Charles [A 1947], Kenmare House, 74 Trumpington Street, Cambridge; 45 De Freville Avenue, Cambridge. F. Chippindale, N. T. Myers, L. J. Gomme.

Darch: John Thomas, Dip.Arch.(Cardiff) [A 1933], Welsh Office, Ministry of Housing and Local Government, Cathays Park, Cardiff; 'Hedjuff', 82 St. Isan Road, The Heath, Cardiff. John Hughes, J. H. Forshaw, Lewis John.

Denman: John Bluet, Dipl.Arch.(U.C.L.) [A 1938], 27 Queen's Road, Brighton 1, Sussex; J. L. Denman, Prof. H. O. Corfiato, S. J. Wearing.

Dugdale: Michael Arthur Stratford, A.A.Dipl., B.A.(Oxon) [A 1933], 16 Dartmouth Street, W.1; 39 Smith Terrace, S.W.3. The Hon. Godfrey Samuel, Geddes Hyslop, A. M. Chitty.

Fermaud: Laurence Hayward Auguste [A 1934], 12 Seymour Street, Marble Arch, W.1; 45 Stanhope Avenue, Finchley, N.3. E. A. Fermaud, G. A. Jellicoe, K. J. Lindy.

Francis: Cyril Herbert, M.B.E., T.D., Dip.Arch.(Cardiff) [A 1934], Welsh Office, Ministry of Housing and Local Government, Cathays Park, Cardiff; 77 Westbourne Road, Penarth, Glam. John Hughes, Lewis John, J. H. Forshaw.

Galloway: Eric Melvin, Dip.Arch.(Abdn.) [A 1936], 10 Portland Street, Southampton; Westering, Ardnavue Crescent, Southampton. Ernest Bird, J. B. Brandt, Colonel R. F. Gutteridge.

Gossage: Neil Frederick, B.A.(Cantab.) A.A.Dipl. [A 1934], 'Milnwood', 13 North Parade, Horsham, Sussex; 'Windacres', Rudgwick, Sussex. L. H. Parsons, C. J. Kay, A. G. Sheppard Fidler.

Greed: John Kenneth [A 1946], 14 Hill Street, Richmond, Surrey; 108 Chertsey Road, Twickenham. S. J. Field, F. C. Button, Lieut.-Colonel Douglas Wallis.

Griffin: John Oswald [A 1940], 87 Northbrook Street, Newbury, Berkshire; Elm Field, Speen, Newbury. B. H. Sutton, O. P. Milne, C. B. Willcocks.

Hamilton: Horace James Dick, D.A.(Glas.) [A 1941], 5 Woodside Terrace, Charing Cross, Glasgow, C.3; 1 Springfield Avenue, Uddingston, Glasgow. Alexander Wright, L. W. Hutson, J. M. Cowie.

Hansen Bay: Peter L., M.A.(Cantab.) [A 1946], The Chantry, 2 Hadham Road, Bishop's Stortford, Herts; Fletchers Homestall, Much Hadham, Herts. Gerald Lacoste, F. G. Thomas, Sir Giles Scott.

Hayton: Matthew, B.Arch.(Dunelm) [A 1935], Messrs. Cordingley and McIntyre, Owengate, Durham; Potters Well, Quarryheads Lane, Durham. Prof. W. B. Edwards, S. W. Milburn, G. H. Gray.

Heathcote: Edgar Ronald, T.D., B.A.(Cantab.) [A 1933], Great Oaks, Fairmile Lane, Cobham, Surrey. Frederick Barber, T. G. Crump, Cecil Burns.

Howells: Bertram Thomas, B.Arch.(L'pool) [A 1936], Messrs. R. and D. Hall, Masonic Buildings, Bangor, Caerns.; Cipolwg, Gorad Road, Upper Bangor. Lieut.-Colonel Douglas Hall, H. A. Mealand, P. M. Padmore.

Jenkins: Aubrey Henry Herbert [A 1938], 42 Lowndes Street, S.W.1; 7 Palace Court, W.2. G. A. Jellicoe, F. M. Harvey, G. R. Dawbarn.
Jones: Frederick Evan [A 1948], 35 John Street, Bloomsbury, W.C.1; 27 The Warren Drive, Wanstead, E.11. Frank Risdon, G. E. Bowden, J. T. W. Peat.

Kelly: Geoffrey Scott [A 1938], 35 Calthorpe Road, Edgbaston, Birmingham 15; Warren Hill, Mearse Lane, Barnt Green, Worcs. J. B. Surman, S. T. Walker, A. G. Sheppard Fidler.

Levy: Eric [A 1936], 32 Deansgate, Manchester 3; 119 Moss Lane, Timperley, Cheshire. Peter Cummings, C. J. Epril, W. C. Young.

Lewis: Idris John, Dip.Arch.(Cardiff) [A 1937], Welsh Office, Ministry of Housing and Local Government, Cathays Park, Cardiff; 'Wood-edge', Westminster Crescent, Cyncoed, Cardiff. John Hughes, J. H. Forshaw, Lewis John.

Lewis: John Theodore [A 1948], Borough Architect, Priory Hall, Dudley, Worcs.; 18 Limepit Lane, Dudley. A. R. Young, G. F. Webb, D. A. Goldfinch.

Lynch-Robinson: Henry Adrian, Dipl.Arch.(L'pool) [A 1943], 7 May Street, Belfast; Selshan Harbour, Gawley's Gate, Co. Antrim. R. H. Gibson, R. S. Wilshe, Frank McArdle.

McIntyre: Donald [A 1931], Messrs. Cordingley and McIntyre, Owengate, Durham; Hoppy Acres, Brancepeth, Durham. Prof. R. A. Cordingley, R. N. Mackellar, Lieut.-Colonel A. K. Tasker.

Morgan: Hugh Lloyd, D.F.C. [A 1935], 2 St. Andrews Place, Cardiff; 14, Black Oak Road, Cyncoed, Cardiff. Howard Williams, Sir Percy Thomas, C. F. Jones.

Morrison: David Elijah, B.A.(Arch.)(Lond.) [A 1937], 8 Park Street, W.1; 37 Holmfield Avenue, Hendon, N.W.4. Prof. A. E. Richardson, E. A. S. Houfe, Prof. H. O. Corfiato.

Munro: Ian Archibald, D.A.(Edin.) [A 1947], Messrs. Thos. Munro & Co., 62 Academy Street, Inverness; The Croft, Dochfour Drive, Inverness. Lieut.-Colonel Alexander Cullen, R. Carruthers-Ballantyne, J. Blackburn.

Plant: James William, Dipl.Arch.(L'pool), A.M.T.P.I. [A 1942], City of Stoke-on-Trent, Reconstruction Department, Woodhouse Street, Stoke-on-Trent; 219 Birches Head Road, Hanley, Stoke-on-Trent. J. R. Piggott, L. C. Howitt, W. B. Oldacre.

Potter: John Alexander, B.A.(Sheffield) [A 1934], School of Architecture, Regional College of Art and Crafts, Anlaby Road, Hull; 29 Humber Dock Side, Hull. J. Konrad, Allanson Hick, F. J. Horth.

Quysner: Charles William, Dip.Arch., Dip.T.P.(Manchester), A.M.T.P.I. [A 1941], 180 Oxford

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80 Oxford

Road, Manchester 13; 22 Dicconson Lane, Westhoughton, Lancs. Prof. R. A. Cordingley, J. P. Nunn, F. L. Halliday.

Sheridan: John Gerard Richard, Dipl.Arch. (L'pool) [A 1939], Messrs. Edmund Kirby & Sons, 5 Cook Street, Liverpool; Honeywood, St. Davids Lane, Nocturn, Birkenhead, Cheshire. Herbert Thearle, Prof. L. B. Budden, F. J. M. Ormrod.

Shrimplin: Clifford Walter [A 1942], Prudential Chambers, Upper George Street, Luton, Beds.; The Cottage, Kinsbourne Green, Harpenden Herts. W. R. Steel, S. C. Parrott, John Gedge.

Steel: George [A 1947], National Provincial Bank Chambers, 50 South Street, Dorchester; 225 Dorchester Road, Weymouth. C. Fifield, E. J. Ricketts, S. Elgar.

Stevens: John Onslow [A 1940], Ministry of Works, Abell House, S.W.1; 'Pymble', 257 Nether Street, Finchley, N.3. A. C. Hopkinson, R. T. Boutall, E. H. Banks.

Summers: Norman, A.A.Dipl., A.I.L.A. [A 1938], Senior Lecturer, School of Architecture, College of Art and Crafts, Nottingham; 116 Parkside, Wollaton, Nottingham. J. W. M. Dudding, T. N. Cartwright, C. St. C. Oakes.

Swain: Paul Bryan O'Brien, M.A.(Cantab.) [A 1947], 28 Halkett Place, St. Helier, Jersey; Les Bois, St. Peter, Jersey. Applying for nomination by the Council under Bye-law 3(d).

Thrasher: William James [A 1926], Messrs. Denman & Son, 27 Queen's Road, Brighton 1, Sussex; 9 Park View Road, Hove 4, Sussex. J. L. Denman, J. R. Edwards, S. J. Wearing.

Turner: Kenneth, Dipl.Arch.(Leeds) [A 1948] 70 Commercial Street, Batley; Broomfield House, Halifax Road, Dewsbury. F. Chippindale, D. A. Fowler, R. H. Winder.

Usher: Wilfred [A 1929], County Architect, County Offices, Bath Street, Hereford; 108 Three Elms Road, Hereford. C. W. Yates, H. W. Hobbs, S. E. Urwin.

Vine: Ronald Owen [A 1926], Tudor Chambers, Station Road, Wood Green, N.22; 16 Dinsdale Gardens, New Barnet, Herts. P. V. Mauger, H. G. Coulter, Clifford Culpin.

Wade: Lewis Edward [A 1926], 21 Albert Road, Middlesbrough; 27 Woodvale Road, Darlington. S. W. Milburn, Samuel Harrison, G. P. Stainsby.

Whitaker: George Patrick Geoffrey [A 1937], 16 Dartmouth Street, S.W.1; Orchard House, Green Lane, Guildford, Surrey. R. W. Cave, Geddes Hyslop, The Hon. Godfrey Samuel.

Williams: Gilbert Becket Arthur [A 1946], 43 Great Ormond Street, W.C.1; 25 Crest Road, Hayes, near Bromley, Kent. H. R. Ross, Harold Greenwood, Frank Risdon.

Williams: Hugh Owen, Dip.Arch.(Cardiff) [A 1946], Welsh Office, Ministry of Housing and Local Government, Cathays Park, Cardiff; Silverbrook, Pentrych, Cardiff. John Hughes, J. H. Forshaw, Lewis John.

Wones: Guy Knight, T.D. [A 1946], 6 Tettenthall Road, Wolverhampton; Parkwood House, 67 Yew Tree Lane, Wergs, nr. Wolverhampton. Bertram Butler, H. G. Wicks, G. A. G. Miller.

Woollatt: James Gordon, D.F.C., M.A.(Cantab.) [A 1948], 4 and 6 Clarendon Street, Nottingham; 20 Devonshire Avenue, Beeston. T. N. Cartwright, J. W. M. Dudding, C. E. Howitt.

Young: Kenneth Mathison, T.D. [A 1948], 42 Tay Street, Perth, Scotland; Hattonbrae, Kinnoull, Perth. G. C. Young, Donald Ross, T. H. Thoms.

and the following Licentiates who are qualified

under Section IV, Clause 4(c) (ii) of the Supplemental Charter of 1925:

Cameron: Donald John, 2 Saxon Road, Glasgow, W.3. Dr. Colin Sinclair, James Taylor, Walter Underwood.

Rolland: Lawrence Anderson, J.P., The Albion House, Shorehead, Leven, Fife; 57 Crossgate, Cupar, Fife; Armadale House, Leven. A. D. Haxton, John Needham, T. H. Thoms.

AS ASSOCIATES (88)

The name of a school, or schools after the candidate's name indicates the passing of a recognised course.

Argo: John Sangster, Dip.Arch.(Abdn.) (Aberdeen Sch. of Arch.: Robert Gordon's Tech. Coll.), Station Road, Kemnay, Aberdeenshire. E. F. Davies, A. B. Gardiner, J. G. Marr.

Baker (Miss): Eileen Margaret, D.A.(Glas.) (Glasgow Sch. of Arch.), 52 Broomvale Drive, Newton Mearns, Renfrewshire. W. A. P. Jack, G. W. Robertson, Prof. W. J. Smith.

Bampton: Cyril James, Dipl.Arch.(Northern Polytechnic) (Northern Poly. (London): Dept. of Arch.), 496A Streatham High Road, Streatham, S.W.16. T. E. Scott, S. F. Burley, C. G. Bath.

Blundell: Ian Lester, Dipl.Arch.(Northern Polytechnic) (Northern Poly. (London): Dept. of Arch.), 48 Wykeham Road, Kenton, Middlesex. T. E. Scott, C. G. Bath, S. F. Burley.

Boardman: Kenneth Port, Dip.Arch.(Birm.) (Birmingham Sch. of Arch.), 296 Lordswood Road, Harborne, Birmingham 17. A. Douglas Jones, H. C. Bloomer, W. N. Hawkes.

Boyd: John Allan, Dip.Arch.(Abdn.), 83 Clifton Road, Aberdeen. E. F. Davies, J. G. Marr, William McCrea.

Bradley: Albert Stephen Edward (Final), 92 Grand Avenue, Berryls, Surbiton, Surrey. K. J. Lindy, F. J. Searley, G. A. Crockett.

Brand: John Edgar Cecil (Arch.Assoc.(London): Sch. of Arch., 41A East Street, Colchester, Essex. H. T. Cadbury-Brown, Bernard George, Harold Conolly.

Caisley: Thomas, B.Arch.(Dunelm) (King's Coll. (Univ. of Durham), Newcastle upon Tyne Sch. of Arch.), 20 Oakwood Avenue, Lowfell, Gateshead on Tyne, 9. Prof. W. B. Edwards, J. H. Napper, Bruce Allsopp.

Caller: Peter Maurice, B.Arch.(Dunelm) (King's Coll. (Univ. of Durham), Newcastle upon Tyne, Sch. of Arch.), 46 Kenton Road, Gosforth, Newcastle upon Tyne, 3. Prof. W. B. Edwards, J. H. Napper, F. Fielden.

Clissold: Allan Morton, Dipl.Arch. (Northern Polytechnic) (Northern Poly. (London): Dept. of Arch.), 64 Fitzjohn's Avenue, Hampstead, N.W.3. T. E. Scott, A. Bailey, E. D. J. Mathews.

Colbourne: Maurice Henry, Dip.Arch.(Birm.) (Birmingham Sch. of Arch.), 18 Cremorne Road, Four Oaks, Sutton Coldfield, Warwickshire. A. Douglas Jones, R. G. Cox, E. L. Gale.

Collymore: Peter Keith, B.A.(Cantab.) (Arch. Assoc. (London): Sch. of Arch.), Hoelain, North Lancing, Sussex. Arthur Korn, R. F. Jordan, H. G. Goddard.

Colwell: Richard William, Dip.Arch.(Dunelm) (King's Coll. (Univ. of Durham), Newcastle upon Tyne, Sch. of Arch.), 14 St. Bedes, East Boldon, Co. Durham. Prof. W. B. Edwards, J. H. Napper, F. Fielden.

Craven: David Antony, Dip.Arch.(Dunelm) (King's Coll. (Univ. of Durham), Newcastle upon Tyne, Sch. of Arch.), 'Renville', 38 East

Ells Drive, Anlaby Road, Hull, Yorkshire. Prof. W. B. Edwards, J. H. Napper, S. W. Milburn.

Cresswell: John Dunlop, D.A.(Glas.) (Glasgow Sch. of Arch.), 586 Edinburgh Road, Glasgow, E.2. Prof. W. J. Smith, Samuel McColl, Alexander Wright.

Curry: Ian, Dip.Arch.(Dunelm) (King's Coll. (Univ. of Durham), Newcastle upon Tyne, Sch. of Arch.), 30 West Park, East Herrington, nr. Sunderland, Co. Durham. Prof. W. B. Edwards, Bruce Allsopp, J. H. Napper.

Davis: James William Thomas, Dip.Arch. (Birm.) (Birmingham Sch. of Arch.), The School House, Culham, nr. Abingdon, Berkshire. A. Douglas Jones, A. G. Sheppard Fidler, T. M. Ashford.

Day: Herbert Francis (Special Final), 3 Wallace Court, 300 Marylebone Road, N.W.1. K. E. Black, E. D. Mills, R. Vaughan.

Diss: Ronald Arthur, (Arch.Assoc.(London), Sch. of Arch.), Coniston, Tidings Hill, Halstead, Essex. Roff Marsh, Denis Senior, Harold Conolly.

Dixon: Dennis Victor, Dipl. Arch. (Northern Polytechnic) (Northern Poly. (London): Dept. of Arch.), 55 Archers Ride, Welwyn Garden City, Herts. C. G. Bath, S. F. Burley, J. K. Robertson.

Dobereiner: David Abraham (Arch. Assoc. (London): Sch. of Arch.), 5 The Greenways, South Western Road, Twickenham, Middlesex. Arthur Korn, R. F. Jordan, Frankland Dark.

Downes: Derek John, Dip.Arch.(Cardiff) (Welsh Sch. of Arch.: The Tech. Coll., Cardiff), 18 Gaer Park Hill, Newport, Mon. Lewis John, Johnson Blackett, C. F. Bates.

Elliott: Anthony Howard, M.A.(Cantab.) (Arch.Assoc.(London): Sch. of Arch.), 18 Queensberry Place, S.W.7. A. B. Knapp-Fisher, Laurence King, Peter Bicknell.

Englefield: Geoffrey Sydney (Special Final), 155 Charlton Road, Kenton, Harrow, Middlesex. C. G. Stillman, R. T. Grummant, Ernest Seel.

Evans: Keith James, B.Arch.(Wales) (Welsh Sch. of Arch.: The Tech. Coll., Cardiff), 1 Danyr-heol, Cyncoed, Cardiff. Lewis John, Sir Percy Thomas, C. F. Jones.

Ferguson: Alan Robert (Final), 'West View', Woolram Wygate, Spalding, Lincs. A. W. Ruddle, A. W. Wilson, J. G. Warwick.

Ferguson: William Derek, D.A.(Dundee) (Dundee Coll. of Art: Sch. of Arch.), 30 Southerton Road, Kirkcaldy, Fife. John Needham, W. S. Gaudie, T. H. Thoms.

Finch: George Bernard, A.A.Dipl.(Arch. Assoc. (London): Sch. of Arch.), 100 South Hill Park, Hampstead, N.W.3. E. M. Fry, Arthur Korn, David Stokes.

Gillit: William (Arch.Assoc.(London): Sch. of Arch.), 100 South Hill Park, Hampstead, N.W.3. R. F. Jordan, Arthur Korn, E. M. Fry.

Hickey: Ronald Joseph, B.Arch.(N.U.I.) (Univ. Coll. Dublin, Ireland: Sch. of Arch.), 24 Glenbeigh Park, N.C.R., Dublin, Ireland. J. O'Hanlon Hughes, W. J. Cantwell, J. J. Robinson.

Hughes: Thomas Hywel Lloyd, B.Arch.(Wales) (Welsh Sch. of Arch.: The Tech. Coll., Cardiff), 'Gwynedd', Tyn-yr-heol, Bryncoch, Neath, Glam. Lewis John, G. H. Griffiths, C. F. Jones.

Hume: Peter Derrick, Dipl.Arch. (Northern Polytechnic) (Northern Poly. (London): Dept. of Arch.), 41 Longfield Avenue, Mill Hill, N.W.7. C. G. Bath, D. F. Martin-Smith, S. F. Burley.

Jones: Ronald William, A.A.Dipl.(Arch.Assoc. (London): Sch. of Arch.), 137 Westminster Road, Sutton, Surrey. Max Lock, R. F. Jordan, Arthur Korn.

Kerr: Harry Alexander, B.Arch.(L'pool) (Liverpool Sch. of Arch., Univ. of Liverpool), 67 Rodney Street, Liverpool, 1. Prof. L. B. Budden, Harry Banister, W. G. Dobie.

Kind: Alan Orson (Final), 106 Saffron Road, South Wigston, Leicestershire. M. W. Pike, W. J. Prince, G. A. Cope.

Lamond: Alastair David, D.A.(Dundee) (Dundee Coll. of Art: Sch. of Arch.), Battleby, Redgorton, Perth. John Needham, T. H. Thoms, W. S. Gaudie.

Langham: Maurice Gordon, Dipl.Arch. (Northern Polytechnic) (Northern Poly. (London): Dept. of Arch.), 69 Mudford Road, Yeovil, Somerset. T. E. Scott, C. G. Bath, W. R. Cooper.

Linnett: Peter Michael, Dipl.Arch. (Northern Polytechnic) (Northern Poly. (London): Dept. of Arch.), 20 Hillside Gardens, Edgware, Middlesex. T. E. Scott, Frederick Gibberd, A. E. Kelsey.

Lovibond: Malcolm Keith Spencer, B.Arch. (Wales) (Welsh Sch. of Arch.: The Tech. Coll., Cardiff), 195 Arabella Street, Roath Park, Cardiff. Lewis John, Sir Percy Thomas, C. F. Jones.

Lyall: John Keith, D.A.(Glas.) (Glasgow Sch. of Arch.), 3 Balfour Crescent, Larbert, Stirlingshire. Prof. W. J. Smith, E. S. Bell, H. Wilson.

McAra: William Fergus Campbell, D.A.(Dundee) (Dundee Coll. of Art: Sch. of Arch.), 85 Balfargie Crescent, Cupar, Fife, Scotland. John Needham, H. M. Smail, T. H. Thoms.

Maier: Joachim, B.Arch.(Dunelm) (King's Coll. (Univ. of Durham), Newcastle upon Tyne, Sch. of Arch.), 8 Osborne Villas, Jesmond, Newcastle upon Tyne, 2. Prof. W. B. Edwards, J. H. Napper, Bruce Allsopp.

Marshall: Roger Frank, Dipl. Arch. (Northern Polytechnic) (Northern Poly. (London): Dept. of Arch.), Phoenix Cottage, Halstead, nr. Sevenoaks, Kent. G. A. Jellicoe, T. E. Scott, E. D. Mills.

Mawson: John Godfrey, Dipl.Arch.(Leeds) (Leeds Sch. of Arch.), 21 Allerton Drive, East Keswick, nr. Leeds, Yorks. W. H. King, N. H. Fowler, F. Chippindale.

Miller: Robert Ernest Goldie, D.A.(Glas.) (Glasgow Sch. of Arch.) c/o Davidson, 184 Woodlands Road, Glasgow, C.3. Prof. W. J. Smith, F. R. Wylie, Walter Underwood.

Mould: Anthony Edward, Dipl.Arch. (Northern Polytechnic) (Northern Poly.(London): Dept. of Arch.), 65 Hornsey Rise, N.19. T. E. Scott, S. F. Burley, C. G. Bath.

Newland: Edwin James, Dip.Arch.(Auck., N.Z.) (Passed a qualifying exam. approved by the N.Z.I.A.), c/o N.Z. House, 415 Strand, W.C.2. Ronald Ward, Victor Wilkins, A. B. Waters.

Newrick: Frederick John (Final), 'Avonlea', 24 Durham Road, Middle Herrington, Sunderland, Co. Durham. S. W. Milburn, E. W. Blackbell, G. T. Brown.

Oliver: Ian Heatley, D.A.(Edin.) (Edinburgh Coll. of Art, Sch. of Arch.), 51 St. Leonard's Street, Dunfermline, Fife. Applying for nomination by the Council under Bye-law 3(d).

Percival: Laurence Breerton, Dipl.Arch. (Sheffield) (Univ. of Sheffield: Dept. of Arch.), 404 Whirlowdale Road, Sheffield 11. Prof. Stephen Welsh, Robert Cawkwell, J. W. Davidson.

Pethybridge: Edwin George, B.A.(Alberta),

B.Arch. (Manitoba) (Univ. of Manitoba, Winnipeg, Canada: Dept. of Arch.), 15 Marylebone Road, N.W.1. Applying for nomination by the Council under Bye-law 3(d).

Pottinger: Malcolm Macleod, D.A.(Edin.) (Edinburgh Coll. of Art: Sch. of Arch.), 19 Montpelier, Edinburgh 10. A. A. Foote, W. H. Kininmonth, J. R. McKee.

Priefert: Ernst H. W., A.A.Dipl. (Arch.Assoc. (London): Sch. of Arch.), 22 Micheldever Road, S.E.12. Arthur Korn, R. F. Jordan, Max Lock.

Redmayne: Stephen, Dip.Arch.(The Polytechnic) (The Poly., Regent Street, London: Sch. of Arch.), 27 Brompton Square, S.W.3. J. S. Walkden, F. L. Preston, J. M. Easton.

Rege: Kamalakar Rajaram (Final), 38, Priory Road, West Hampstead, N.W.6. Applying for nomination by the Council under Bye-law 3(d).

Robertson: Charles Archibald, D.A.(Glas.) (Glasgow Sch. of Arch.) Gilnahirk, Dunblane, Perthshire. W. A. P. Jack, Walter Underwood, G. F. Shanks.

Russell: David Oscar (Special Final), The Old House, Ashurst, Steyning, Sussex. K. E. Black, S. H. Tiltman, J. L. Denman.

Sangster: Douglas Osborn, Dip.Arch.(Abdn.) (Aberdeen Sch. of Arch.: Robert Gordon's Tech. Coll.), White Cottage, Datchworth Green, nr. Knebworth, Herts. E. F. Davies, C. H. Aslin, and applying for nomination by the Council under Bye-law 3(d).

Scott: Adam Thompson, Dip.Arch.(Dunelm) (King's Coll. (Univ. of Durham), Newcastle upon Tyne, Sch. of Arch.), The Orchard, Coldstream, Berwickshire. Prof. W. B. Edwards, T. J. Cahill, J. H. Napper.

Shackleton: Frederick Irving, B.Arch.(Dunelm) (King's Coll. (Univ. of Durham), Newcastle upon Tyne, Sch. of Arch.), 175 Warwick Road, Carlisle, Cumberland. Prof. W. B. Edwards, Bruce Allsopp, J. H. Napper.

Simpson: John Stanley, D.A.(Glas.) (Glasgow Sch. of Arch.), 56 Smithfield Loan, Alloa, Clackmannanshire. Prof. W. J. Smith, W. A. P. Jack, G. W. Robertson.

Slater: Gareth Hilary, B.A.(Cantab.) (Arch. Assoc. (London): Sch. of Arch.), White House, Altwood Road, Maidenhead, Berks. W. P. Dyson, D. W. Roberts, Peter Bicknell.

Smith: George Beric Graham, B.A.(Cantab.), Dipl.Arch. (Northern Polytechnic) (Northern Poly. (London): Dept. of Arch.), 69 Hornsey Lane, Highgate, N.6. P. F. Burrigge, T. E. Scott, Dr. J. L. Martin.

Smith: Graham John, Dipl.Arch.(Northern Polytechnic) (Northern Poly. (London): Dept. of Arch.), 25A Wellington Gardens, Charlton, S.E.7. C. G. Bath, Frederick Gibberd, A. E. Kelsey.

Smith: Michael Joseph, Dip.Arch.(Birm.) (Birmingham Sch. of Arch.), 8 The Holloway, Compton, nr. Wolverhampton, Staffs. A. Douglas Jones, A. G. Sheppard Fidler, T. M. Ashford.

Smyth: Robert Rudd, B.Arch.(L'pool) (Liverpool Sch. of Arch., Univ. of Liverpool), 67 Maxwell Road, Rathgar, Dublin. Raymond McGrath, J. O'H. Hughes, W. J. Cantwell.

Stabler: John Gordon Wilton (Arch.Assoc. (London): Sch. of Arch.), 16 Rosehill Avenue, Horsell, Woking, Surrey. F. T. Orman, Arthur Korn, R. F. Jordan.

Stanhope: Derek Anthony (Arch.Assoc.(London): Sch. of Arch.), 25 Swiss Avenue, Chelmsford, Essex. Harold Conolly, Denis Senior, Roff Marsh.

Steerwood: John Richard, A.A.Dipl. (Arch. Assoc.(London): Sch. of Arch.), 118 Ebury Street, S.W.1. T. E. Scott, R. F. Jordan, H. G. Goddard.

Tarren: Jeffrey Owen, Dip.Arch.(Dunelm) (King's Coll. (Univ. of Durham), Newcastle upon Tyne, Sch. of Arch.), 24 Front Street, Sedgfield, Stockton-on-Tees, Co. Durham. Prof. W. B. Edwards, J. H. Napper, Bruce Allsopp.

Taylor: John Stephen, B.A.(Cantab.), A.A.Dipl. (Arch.Assoc. (London): Sch. of Arch.), 18 Princes Gate Mews, S.W.7. H. C. Inglis, Guy Morgan, B. A. Hebler.

Thompson: John Derek, Dipl.Arch.(Leeds) (Leeds Sch. of Arch.), 7 Killinghall Grove, Undercliffe, Bradford 2, Yorks. F. Chippindale, D. A. Fowler, W. C. Brown.

Tomlinson: (Miss) Anna Margaret, A.A.Dipl. (Arch.Assoc. (London): Sch. of Arch.), 68 Evelyn Gardens, S.W.7. H. C. Hughes, Mrs. Gillian Harrison, H. St. J. Harrison.

Toon: John Graham, Dip.Arch.(Leics.) (Leicester Coll. of Art and Tech. Sch. of Arch.), 349 Aylestone Road, Leicester. S. Penn Smith, F. Chippindale, Basil Spence.

Trigg: William Clive, Dip.Arch.(Leics.) (Leicester Coll. of Art and Tech. Sch. of Arch.), 301 Park Road, Loughborough, Leicestershire. S. Penn Smith, F. Chippindale, T. W. Haird.

Turner: Ian Campbell, D.A.(Glas.) (Glasgow Sch. of Arch.), 22 Trinity Avenue, Glasgow, S.W.2. Prof. W. J. Smith, W. J. B. Wright, A. G. Henderson.

Vaidya: Aravind Moreshwar (Final), 6-7 Great Castle Street, W.1. E. M. Fry, Miss J. B. Drew, H. C. Mason.

Wakeling: William George (Final), 21 Ashurst Drive, Ilford, Essex. Frank Risdon, B. W. H. Scott, C. E. Westmoreland.

Walker: Derek John, Dipl.Arch.(Leeds) (Leeds Sch. of Arch.), 7 The Green, Moortown, Leeds, 17. F. Chippindale, N. H. Fowler, D. A. Fowler.

Walter: Maurice Vince (Special Final), 23 Gipton Wood Road, Leeds, 8. Applying for nomination by the Council under Bye-law 3(d).

White: Francis Sibbald, D.A.(Edin.) (Edinburgh Coll. of Art: Sch. of Arch.), 11 Lauriston Place, Edinburgh, 3. J. R. McKay, T. W. Marwick, W. H. Kininmonth.

White: Peter Harvey, Dipl.Arch. (Northern Polytechnic) (Northern Poly. (London): Dept. of Arch.), 7 Leamington Close, Bromley, Kent. T. E. Scott, S. F. Burley, C. G. Bath.

Whitham: David Edgar, B.A.(Cantab.) (Arch. Assoc.(London): Sch. of Arch.), 3 Hawthorn Crescent, Easthouses by Dalkeith, Midlothian, Scotland. Arthur Korn, E. Riss, Peter Bicknell.

Wilson: John Alastair Fraser, D.A.(Glas.) (Glasgow Sch. of Arch.), 60 Fernleigh Road, Glasgow, S.3. L. H. Ross, Prof. W. J. Smith, G. F. Shanks.

Winskell: Cyril (King's Coll. (Univ. of Durham), Newcastle upon Tyne, Sch. of Arch.), 13 Wadham Terrace, South Shields, Co. Durham. Prof. W. B. Edwards, D. L. Couves, J. H. Napper.

Wootton: Donald Gilroy, Dipl.Arch. (Northern Polytechnic) (Northern Poly. (London): Dept. of Arch.), 58 Hillfield Park, Winchmore Hill, N.21. T. E. Scott, S. F. Burley, C. G. Bath.

Young: Patrick Templeton (Arch.Assoc. (London): Sch. of Arch.), 8 Lansdowne Walk, W.11. R. F. Jordan, Prof. Basil Ward, K. D. P. Murray.

AS LICENTIATES (26)

Biggs: Kenneth, Borough Surveyor's Department, Architect's Branch, 4A Lord Street, Rochdale, Lancs.; Flat, 561 Bury Road, Rochdale. Applying for nomination by the Council under Bye-law 3(d).

Colliver: Thomas Stead, Architect's Department, County Hall, Cardiff; 75 Conway Road, Penhill, Cardiff. L. R. Gower, D. F. Ingleton, Lewis John.

Eccles: George William, Architect to Messrs. Greenall, Whitley & Co. Ltd., The Brewery, Hall Street, St. Helens, Lancs.; 2 Devonshire Road, St. Helens. F. N. Pinder, R. M. McNaught, William Ellis.

Finlayson: Kenneth John, Messrs. John G. Chisholm & Co., 11 High Street, Inverness; 2 Drummond Circus, Inverness. The late J. A. Ross, D. P. Hall, R. Carruthers-Ballantyne.

Flint: John Brentnall, c/o Messrs. Evans, Cartwright & Woollatt, 6 Clarendon Street, Nottingham; 53 Kniveton Park, Ilkeston, Derbyshire. R. W. Cooper and the President and Hon. Secretary of the Nottingham, Derby & Lincoln Society of Architects under Bye-law 3(a).

Freeman: Arthur John, Town Hall, Sale, Cheshire; 33 Barwell Road, Sale. J. P. Nunn, Prof. R. A. Cordingley, J. G. McBeath.

Fysh: Gilbert Roy, Air Ministry, W.D.O.1., Bush House, N.E. Wing, Aldwych, W.C.2.; 43 York Gardens, Braintree, Essex. A. Beasley, Miss J. E. Townsend, E. J. Harrison.

Godden: Maurice, Staff Architect, Mac-Fisheries Ltd.; 56 Borkwood Way, Orpington, Kent. S. Clough, K. E. Black and applying for nomination by the Council under Bye-law 3(d).

Hickie: John Joseph, Messrs. Vincent Burr and Partners, 85 Gower Street, W.C.1.; 2 Lee Court, Lee High Road, S.E.13. D. P. Marshall, Sir Thomas Bennett, R. B. Craze.

Hill: Gwenith Waldo, Westminster Bank Chambers, Taunton, Somerset; Duddleston House, nr. Taunton. G. D. G. Hake, J. N. Meredith, C. G. Toy.

Johnston: Frank Wood, 47 Charlotte Street, Leith, Edinburgh 6; 32A Lauder Road, Edinburgh 9. J. R. McKay, W. H. Kininmonth, J. S. Johnston.

Lill: John Robert, c/o H. Webster, Esq. [L], Norfolk Row, Sheffield 1; 7 Heather Lea Place, Dore, Sheffield. H. B. Leighton, H. A. Hickson, H. B. S. Gibbs.

Logan: Matthew Clarence, 81-87 Academy Street, Belfast; 'The Limes', Belfast Road, Carrickfergus, Northern Ireland. R. S. Wilshire, R. H. Gibson, Frank McArdle.

Meakin: Thomas Henry Stafford, 11 Warwick Row, Coventry; 98 Kenilworth Road, Coventry. W. S. Hattrell, R. Hellberg, A. H. Gardner.

Meredith: Roy Francis, Bleak House, Station Road, Gloucester; 'Hillrise', St. Whites Road, Cinderford, Glos. H. S. Davis, C. W. Yates, H. F. Trew.

Nicholass: Bertram George, Staff Architect, Messrs. Wm. Timpson Ltd., Empiric House, Gt. Ducie Street, Manchester 3; 30 Lancaster Road, Salford 6. Applying for nomination by the Council under Bye-law 3(d).

Parkinson: Tom Noel, Leeds Industrial Co-operative Society Ltd., Works Dept., 24 Meadow Road, Leeds, 11; 11 Norfolk Mount, Leeds, 7. W. H. King, Noel Pyman, N. H. Fowler.

Rex: Leon, Ministry of Works, Neville House, Page Street, S.W.1; 29 Halsey Street, Chelsea, S.W.3. A. F. French, W. A. Rutter, Z. Sirotkin.

Selfe: Edward Cecil, County Architect's Department, Newport, Isle of Wight; Swallowfield, Park Road, Wootton, Isle of Wight. Vernon Aldridge and the President and Hon. Secretary of the Hampshire and Isle of Wight Architectural Association under Bye-law 3(a).

Snell: Edward Rex Saxon, 6 New Square, Lincolns Inn, W.C.2.; South Wind, Bucklers Lane, King's Langley, Herts. G. W. Smith, R. L. Banks, Frederick Gibberd.

Stewart: Major Harry, 30 Crompton Street, Bury, Lancs.; 'Lealholm', 70 Hollins Lane, Accrington, Lancs. Applying for nomination by the Council under Bye-law 3(d).

Stone: Herbert George John, c/o Messrs. Joseph, 10 Lowndes Square, S.W.1; 50 Bramerton Road, Beckenham, Kent. E. M. Joseph, F. M. Cashmore, Frederick Gibberd.

Thomson: John, Messrs. Fremains Ltd., The Brewery, Court Street, Faversham, Kent; 7 Briton Road, Faversham. H. C. Ashenden, Anthony Swaine, H. Anderson.

Twydell: George Edward, A.R.I.C.S., City Architect's Dept., Town Hall, Bradford, Yorks.; 'Hillside', Derry Hill Road, Menston, nr. Leeds. W. B. Wheatley, Allanson Hick, W. C. Brown.

Wilkinson: James Arthur, c/o Midlands Electricity Board, Wolverhampton and District Sub Area; 33 Elm Road, Albrighton, nr. Wolverhampton. Applying for nomination by the Council under Bye-law 3(d).

Wyatt: Norman Albert Edward, 2 Castle Hill Road, Hastings, Sussex; 'Green Ridge', St. Helens Wood Road, Hastings. Edgar Bunce, Cecil Burns, H. Anderson.

ELECTION: 10 APRIL 1956

An election of candidates for membership will take place on 10 April 1956. The names and addresses of the overseas candidates, with the names of their proposers, are herewith published for the information of members. Notice of any objection or any other communication respecting them must be sent to the Secretary, R.I.B.A., not later than Wednesday 14 March 1956.

The names following the applicant's address are those of his proposers.

AS FELLOWS (3)

Sturrock: Frederick Lamond [A 1939], Acrow House, 23 Dock Road, Cape Town, S. Africa; Silverhill, Constantia, Cape. Prof. L. W. T. White, H. L. Roberts, R. F. R. Day.

Woolmer: Stanley Charles, M.T.P.I. [A 1938], Singapore Improvement Trust, P.O. Box 702, Singapore; 15 Kay Siang Road, Singapore 10. W. I. Watson, A. G. Church, K. A. Brundle.

and the following Licentiate who has passed the qualifying Examination:

Crowe: Cecil John, T.D., Chief Architect, East African Railways and Harbours, P.O. Box 79, Nairobi, Kenya. H. T. Dyer, G. B. E. Norburn, Mrs. E. D. Hughes.

AS ASSOCIATES (5)

Chia: (Miss) Kim Hiok, B.Arch.(Melbourne) (Passed a qualifying Exam. approved by the R.A.I.A.), 80 Branksome Road, Singapore. Prof. B. B. Lewis, Mrs. Hilary Lewis, R. G. Parker.

James: Leslie Kevin (Passed a qualifying Exam. approved by the N.Z.I.A.), Regent Cinema

Building, 198 High Street, Hawera, New Zealand. Prof. C. R. Knight, Prof. A. C. Light and the President and Hon. Secretary of the New Zealand Institute of Architects under Bye-law 3(a).

Lee: Soo Chuan, B.Arch.(Melbourne) (Passed a qualifying Exam. approved by the R.A.I.A.), 6A Stonor Road, Kuala Lumpur, Malaya. Prof. B. B. Lewis, Mrs. Hilary Lewis, R. G. Parker.

McArthur: Thomas Drysdale, Dip.Arch. (Auck N.Z.) (Passed a qualifying Exam. approved by the N.Z.I.A.), 282 Naenae Road, Lower Hutt, New Zealand. Prof. C. R. Knight, Prof. A. C. Light and the President and Hon. Secretary of the New Zealand Institute of Architects under Bye-law 3(a).

Penman: Breton Clyde (Passed a qualifying Exam. approved by the N.Z.I.A.), c/o E. B. Cumine [F], Embassy Court, Hong Kong. Prof. C. R. Knight, E. B. Cumine, Prof. A. C. Light.

Members' Column

This column is reserved for notices of changes of address, partnership and partnerships vacant or wanted, practices for sale or wanted, office accommodation, and personal notices other than of posts wanted as salaried assistants for which the Institute's Employment Register is maintained.

APPOINTMENTS

Mr. D. J. Arnold [A] has taken up an appointment as Assistant Architect in the Public Works Department at Kuching, Sarawak, and he will be pleased to receive trade catalogues at that address.

Mr. Michael Askwith [A] has been appointed Resident Architect in charge of the Aden Office of Messrs. J. M. Wilson, H. C. Mason and Partners. His address as from January 1956 will be P.O. Box 1222, Steamer Point, Aden.

Mr. J. Campbell-Smith [A] has taken up an appointment with Bata Development Ltd., 15 Old Bond Street, London, W.1, and he will be pleased to receive trade catalogues and samples, etc.

Mr. Charles D. Hay [A] has been appointed architect to the Public Works Department, Sierra Leone, West Africa, and will be pleased to receive trade catalogues, etc., there.

Mr. Sidney Loweth, F.S.A. [F], formerly County Architect for Kent, is now consultant to Messrs. H. O. Corfiato, Thomson and Partners of 15 Woburn Square, London, W.C.1.

Professor Gordon Stephenson, M.C.P., M.T.P.I., A.I.L.A. [F], has been appointed Professor of Town and Regional Planning in the School of Architecture, University of Toronto, and Head of the Division of Town and Regional Planning.

PRACTICES AND PARTNERSHIPS

Mr. Donald Bradshaw [F] has opened an office in Queen Insurance Buildings, 10 Dale Street, Liverpool 2, and will be pleased to receive trade catalogues, etc.

Mr. John B. Crowther [A] has now returned from the army to full-time practice with his partner **Mr. John Taylor** [A] under the style **Taylor & Crowther** at 66 Lemon Street, Truro, Cornwall, and will be pleased to receive manufacturers' trade catalogues and samples.

Mr. John Mack Forbes [F], formerly a Senior Assistant with Lancashire County Council, has joined **Mr. W. R. C. Houston, F.R.I.C.S.**, in practice at 30 Burnley Road, Padiham, Lancashire. With effect from early in the New Year the business will be conducted in the name of **Houston & Forbes** from Old Black Bull, Church Street, Padiham, Lancs.

Messrs. Hadfield, Cawkwell & Davidson, of Sheffield, have opened an office at 50 Pall Mall, London, W.1, under the supervision of **Mr. J. D. Shearer [A]**, who will be pleased to receive trade catalogues.

Mr. John Godwin [A] is now practising with his wife, **Miss Gillian Hopwood [A]** under the style of **Godwin and Hopwood**. They have opened their offices at 8 Oil Mill Street, Lagos, Nigeria, where they will be pleased to receive trade catalogues. All communications should be addressed to: Private Mail Bag 2148, Lagos.

Mr. R. Craig Graham [A] is entering into private practice at 6 Thompson Street, Workington, Cumberland, where he will be pleased to receive trade catalogues, etc., from 9 January 1956 onwards.

Mr. N. D. Hodgson [A] has dissolved partnership with **Messrs. Reavill and Cahill**, Alnwick, and is now practising on his own account at Lesbury, Alnwick, Northumberland (Tel. Alnmouth 232), where he will be pleased to receive trade catalogues, etc.

Messrs. J. W. Howard [A] and **B. A. Rider [A]** have entered into partnership and are practising from 10 Rolleston Drive, Wallasey, Cheshire, where they will be pleased to receive trade catalogues.

Mr. Norman H. Hunt [A] has now taken over the entire practice in Ndola, Northern Rhodesia, formerly known as Crocker & Hunt, **Mr. Alan E. Crocker [A]** having unfortunately had to return to England owing to ill-health. The partnership has been dissolved by mutual consent. The office has been moved to Arcadia House, King George Avenue, Ndola. The telephone number, 2629, and box number, 641, remain as previously. **Mr. Hunt** will carry on the practice under his own name—**Norman Hunt**.

The firm of Powers, Powers & Logan has been dissolved by mutual consent of the partners. **Mr. W. Logan [A]** and **Mr. D. E. Lang [A]** have entered into partnership and will conduct their practice under the title of **Logan & Lang** at 801 N.B.S. Building, Main Street, Port Elizabeth, South Africa.

Mr. Frederick MacManus [F] has taken into associate partnership **Mr. Richard M. Wackerbarth [A]**. The practice will be continued as previously under the style of **Edward Armstrong and Frederick MacManus** from 28 Gloucester Place, Portman Square, London, W.1. (WELbeck 2273-4).

Mr. Edward D. Mills [F] has taken into partnership **Mr. F. A. Turner [A]** and **Mr. G. C. Bodgener [A]**. The practice will be continued at 15 Carlisle Street, Soho Square, W.1, as **Edward D. Mills and Partners**.

Mr. James F. Munce [A] of Munce & Kennedy, of Belfast, has opened an additional office at 13 Eglington Crescent, Edinburgh. In Scotland he will practise in association with **Mr. R. H. Cuthbertson**, consulting civil engineer, of the same address.

Mr. Edward Narracott [F] of 48 Torwood Street, Torquay, has taken into partnership **Mr. Ivan M. Bellamy [A]**. The style of the firm will be **Edward Narracott & Partner**.

Mr. Norman Neil, F.S.A. [A], is now practising at 'The Haining', Polmont, Stirlingshire, Scotland, where he will be glad to receive trade catalogues, etc.

Mr. Richard S. Nickson [F] has opened a second office in London at 33 Welbeck Street, W.1. (WELbeck 1681), to deal with all United Kingdom practice. This office is distinct from his overseas drawing office, which is also at the same address (WELbeck 1778). The West African practice of **Messrs. Nickson & Borys** continues to be administered from a head office in Lagos, Nigeria, with branch offices in Accra and Sierra Leone.

Mr. W. Wylton Todd [F] has closed his London office owing to illness and has gone abroad for a period to recuperate. It has been arranged for **Mr. P. F. J. Lawson [A]** of **Messrs. Atkinson, Carter & Lawson**, 11 Duke Street, Manchester Square, W.1, to complete the contracts and carry out any future works.

CHANGES OF ADDRESS

Mr. L. R. Bovingdon [A] has changed his address to 2 Yew Tree Road, London, W.12.

Mr. F. V. W. Clark [A] has moved to 24 Malvern Avenue, Grimsby, Lincs. (Grimsby 77817), and will be pleased to receive trade catalogues there.

Mr. Kenneth D. Coles [A] has moved to 3440 Peel Street, Flat 38, Montreal, P.Q., Canada (Telephone AV8-1980).

Messrs. Clifford Culpin & Partner [F/A] have moved to 39 Doughty Street, London, W.C.1. The telephone number remains unchanged (CHAncery 5395).

Mr. B. Gillinson [A] has moved his office to 8 Queen Square, Leeds 2. The telephone number remains unchanged (Leeds 22664).

Mr. Denys Hinton [A] has moved his office to 21 The Parade, Leamington Spa (Leamington Spa 1197).

The office address of **Mr. John D. Maidment [L]** (**Messrs. Holmes, Son, Archer & Maidment**) is 1 East Parade, Sheffield 1 (Sheffield 28579-28570).

Mr. Wallace Hunt [A] has moved his office to 3 Staple Inn, Holborn, London, W.C.1 (CHAncery 2419).

Mr. R. John Lansdown [A] is now at 34 Lambs Conduit Street, London, W.C.1 (HOLborn 2104).

Messrs. Max Lock & Partners, M./A.M.T.P.I. [F/A], architects and town planning consultants, have moved their London offices to 109 Gt. Russell Street, W.C.1 (MUSEum 2193-4).

Mr. Joseph W. Murphy [A] has changed his private address to 14 Honeygate, Luton, Beds.

Mr. Robert P. Nicholls, A.M.T.P.I. [A] has changed his address to 4024 Spruce Street, Philadelphia 4, Pennsylvania, U.S.A.

Mr. Arthur J. Norcliffe [F] has changed his office address to 66 Victoria Street, Westminster, London, S.W.1.

Mr. A. H. Robertson [A] is now an assistant architect with the Singapore Improvement Trust, Upper Pickering Street, Singapore, and will be pleased to receive trade literature at that address.

Mr. G. H. Sayce [A] has moved to 10 Silkmere Crescent, Stafford.

Mr. Arthur Stephenson [A] has moved to 70 Burwood Road, Walton-on-Thames, Surrey, where he will be pleased to receive trade catalogues, etc.

Mr. Ivor A. Taylor [A] has now moved to 30 Monmouth Road, Dorchester, Dorset.

Mr. E. Thompson [A] has left the service of the Berkshire County Council and has taken up an appointment with the County Education Architect, Staffordshire County Council, at Greenhall, Lichfield Road, Stafford.

Mr. Felix Walter [F] has transferred his office to 10 Neale Street, Ipswich (Ipswich 51321) where he will be pleased to receive trade catalogues, etc.

PRACTICES AND PARTNERSHIPS WANTED AND AVAILABLE

Fellow (46) requires responsible post leading to partnership. Oxon/Berks area or London. Wide practical experience, industrial, domestic, job and office management. Quantities. Some capital available. Box 99, c/o Secretary, R.I.B.A.

Principal leaving Southern Rhodesia wishes to dispose of practice there complete with fully equipped office, good staff, with work in progress and in sketch plan stage. No reasonable offer refused. Modern house available if required. Reply in confidence. Box 101, Secretary, R.I.B.A.

Small growing practice near Exeter in coast resort, available for purchase at once. Full particulars from Box 102, c/o Secretary, R.I.B.A.

WANTED AND FOR SALE

Wanted: copy of Bevan's *History of Spanish Architecture*. Box 97, c/o Secretary, R.I.B.A.

For sale: architect's library, whole or part, and some fittings. Box 100, c/o Secretary, R.I.B.A.

Member wishes to dispose of double-elephant arc horizontal wall photo-copier and developing machine. All in perfect order. £55. Can be seen at Kingston-upon-Thames. Box 103, c/o Secretary, R.I.B.A.

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THE PURCHASE OF PARTNERSHIPS IN ARCHITECTS' PRACTICES

The A.B.S. Insurance Agency Ltd. is able to arrange in favourable circumstances advances to provide for the above, with a leading Life Assurance Office.

Amount of advance would be 80 per cent of two years' purchase of the average net profits for the last three years provided there are at least two qualified partners (R.I.B.A.) including applicant. Interest 5½ per cent.

Advance £1,000-£3,000.

Further particulars from the Secretary, A.B.S. Insurance Agency Ltd., 66 Portland Place, London, W.1.

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